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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and improve the character of the service rendered to the public.

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THE PARIS CONGRESS ON NAVIGATION.

The Paris Congress on Navigation commences on the 28th inst., and will continue until August 3. There are only two English contributors to this important Congress, viz., Mr. A. G. Lyster and Mr. Vernon-Harcourt, both of whom have sent in communications to the seventh section, which deals with "works recently carried out in large littoral or maritime ports." The Congress will be divided into four sections, and nine question will be submitted for discussion, the section being as follows: (1) Internal Navigation; Construction Works. (2) Internal Navigation; Management and Working. (3) Ocean Navigation, Works. (4) Ocean Navigation; Management and Working. Each section is divided into several sub-heads, and there will be two classes of meetings at the Congress—sectional meetings, where the subjects to be dealt with are to be first considered; and general meetings for full discussion. The communication will be printed in the three languages, French, German, and English, and the discussions will be held in these tongues; no member is to speak for longer then fifteen minutes at a time, nor more than twice on the same subject without special permission. Members speaking will be expected to furnish the Secretary of the Congress with a copy of their remarks, so that they may be printed within the twenty-four hours following, otherwise a summary will be published, the accuracy of which cannot be officially guaranteed.

NEW YORK STATE FLAG BILL.

"Any person who in any manner, for exhibition or display, puts or causes to be placed any inscription, design, device, symbol, name, advertisement, words, characters, marks or notice whatever upon any flag, standard, color or ensign of the United States or State flag of this State or ensign evidently purporting to be either of said flags, standards, colors or ensigns, or who in any manner appends, annexes or affixes to any such flag, standard, color or ensign any inscription, design, device, symbol, name, advertisement, words, marks, notice or token whatever, or who displays or exhibits or causes to be displayed or exhibited, any flag, standard, color or ensign of the United States, or flag of this State, or flag, standard, color or ensign evidently purporting to be either of said flags, standard, colors or ensigns, upon which shall, in any manner, be put, attacked, annexed or affixed any inscription, design, device, symbol, name, advertisement, words, marks, notice or token whatever, or who publicly mutilates, tramples upon or otherwise defaces or defiles any of said flags, standards, colors, ensign, whether said flags, standards, colors or ensigns are public or private property, is punishable by imprisonment for not more than one year, or by a fine of not more than $250, or by both such imprisonment and fine. Provided, however, that this section shall not apply to flags, standards, colors, the property of or used in the service of the United States or of this State, upon which inscription, names of action, words, marks or symbols are placed pursuant to law or authorized regulation."

THE NEW BATTLESHIPS.

The Navy Department has issued a circular defining the chief characteristics of the three battleships authorized by act of Congress, approved March 3, 1899, and of the two battleships authorized by the act of June 7, 1900. The circular quotes the language of the serveral acts and then says: "Two classes of bids are desired on the battleships authorized by the act of March 3, 1899, namely, bids for sheathed and coppered vessels, in accordance with the requirements of the act, and bids for the same ships not sheathed and coppered, the Department reserving the right to adopt either form of construction, in case it should be authorized to do so, at the price named in the bid for such sheathed or unsheathed ships, the award, however, being based on the bid for sheathed and coppered ships. Bids on the battleships authorized by the act of June 7, 1900, should be on unsheathed vessels only."

The general plans may be examined in the bureau on and after Sept. 15, 1900. They will be ready for distribution among respective bidders on application, October 15, and the bids will be opened at the Department on the 15th of November.

NOMENCLATURE.

At the end of June the Shipping Gazette published a couple of letters under the above heading, and we cannot but think, on reading them, that this serious journal for once perpetraed a little joke on its readers. The writer of the first letter found fault with the plan—which has many conveniences to recommend it—whereby shipowners name their vessels, and he objected to their calling them the Lake———,the Gulf of——, the——Sea, and so on. He preferred, he said, the practice adopted by the White Star Co., and the Royal Navy. Now we must agree that the naming of the White Star steamship is good. But who can defend some of the names given to the Queen's ships? Take those for an example, of the torpedo boat destroyes. We have the Whiting—now making history in China—and the Skate. Surely it would be hard to get less suitable names for vessels than these, and many equally inappropriate could be instanced. The writter of the letter goes on to suggest that possible passengers are attracted by the names of the vessels which offer themselves for their service. He argues that the names he holds up to ridicule would repel, whilst well chosen names would attract. But, granted that he is right, the difficulty, to our mind, would then arise as to what really would attract and what would repel. His attraction apparently would be toward vessels named after Greek philosophers. But some people would be more frivolous, and might care more for the names of the heroes and heroines of romance. The ideas of asking the Board of Trade to choose ships' names, or of having improving lectures on the history of the vessel's namesake aboard, is so impracticable that we cannot help thinking that the writer was making the subject a mere jest. The range for inspectors and state management must stop somewhere, and the limit should certainly be on ere it comes to dealing with ships' names.—London Marine Engineer.

ACOUSTIC TRIANGULATION.

The Atlantic Monthly for August will publish an article by Mr. Sylvester Baxter, describing a system of signaling by which a vessel can find her way in thick weather all along the coast as well as into port. The system is based upon a notation of the difference in the intervals between sounds transmitted by bells located on shore, through the water at the rate of 4,712 feet a second from stations at the entrance of a harbor. "The fixed mathematical relation of time intervals subsisting between simultaneously sounded signals received at any unknown point from three triangularly disposed signaling stations established at known distances from one another, determines the angles between these stations and the point of observation."

The bells are separated by the distance that sound will travel under water in ten seconds or 47,120 feet, and are sounded at intervals of ten seconds between each. The navigator is furnished with a diagram showing at what point sound from the several bells will reach him at a given interval after they are struck. Knowing the distance between the bells and the intervals at which they are sounded he can determine his location by the diagrams. With a special telephone receiver invented for the purpose by Professor Gray the signals can be heard more than five miles away. This instrument may be attached to the outside of the ship under water, near the keel and on either side of the bow, like a pair of ears, with wire connections made to the pilot house therefrom, or it may be dropped over the side like a sounding-line when there is any occasion to use it.

Signal No. 1 would be located at the entrance of a harbor, with Nos. 2 and 3 off shore, to the right and left. With a special cable laid to each, the signals would be automatically sounded once in thirty seconds, at intervals of ten seconds between each. To identify each signal, No. 1 would declare itself by one stroke, No. 2 by two strokes, and No. 3 by three strokes, sounded in quick succession, as in the clicking of a telegragh instrument. These signals would be accurately located on the coast chart. The curves of equal sound-intervals could be printed on the chart, or better still, to the avoidance of confusion with other markings on the chart, they could be printed or engraved on some translucent substance like glass or celluloid, and laid upon the chart.

"Acoustic triangulation," as it is called, is the joint invention of Mr. Arthur J. Mundy, a Boston gentleman, and Prof. Elisha Gray, and is an application at sea of the principle of trangulation used in surveying on land. In this case the three points are located by sound instead of by sight.

It is expected at the Navy Department that the bidding this fall on the new ships of war recently designed, will be much more extensive than in the past. As will be remembered, hitherto only three firms in this country have offered bids on the battleships, but several new concerns have sprung into existence and will enter into the contest. The three old firms: The Union Iron Works, The Newport News Ship Building Co. and Cramp's will of course bid, and bids are expected from the Bath, Me., Iron Works, the Trigg Co. and several others of later date. There is very little doubt that one of the new firms will get a contract for at least one of the cruisers. The work on the plans of the new vessels is progressing most satisfactorily. Chief Naval Constructor Hichborn, who has this matter under control, now has a large force of capable men at work on the drawings and every effort will be made to have them completed at the earliest opportunity. At any event, it is desired that the contract be made prior to the meeting of Congress in December, as there has already been too much delay on the ships.

DETROIT.

Special Correspondence to the Marine Record.

Capt. William Covers is master of the new steamer Simon J. Murphy of the Shaw-Eddy fleet and Henry Annett is chief engineer.

The steamer Northern Wave broke a bucket on her propeller wheel leaving Cleveland harbor. She put in here to receive a new wheel.

The breaking of the steering gear of the Mahoning, at the Lime Kilns Saturday morning, will prove a costly accident before the steamer clears from Detroit.

While coming through the Welland canal Saturday the steamer Nipigon damaged her stem. She is being repaired at the Orleans street yard of the Detroit Ship Building Co.

The steamer City of Cleveland and consort Sandusky, bound down with ore, struck on the rocks abreast of Amherstburg. The steamer damaged her steering gear and was towed to Cleveland.

The little steamer Sakie Sheperd, which was badly damaged by fire two years ago in Detroit, is being rebuilt at Marine City. She is being lenghthened eighteen feet. The Shepherd had been lying in the Detroit river until taken over by John Stevenson.

This will be the most quiet season in many years in lumber shipments from Marinette and Menominee. It is said that some who purchased lumber from local dealers at the high price last year will not take the lumber at all, being unable to pay for it without ruining themselves.

Next Saturday afternoon the wooden schooner which Capt. Davidson is building as an addition to his fleet will be launched at the Davidson shipyard, West Bay City. Her dimensions are 350 feet long, 45 feet beam and 24 feet deep. Work on the steamer No. 95 will be completed at the Davidson yard about October 1.

The new steamer S. J. Murphy left the dock of the Detroit Ship Building Co. last week for the head of the lakes. Capt. William Cavers was in charge and Henry Annett was chief engineer. The big steamer represents an outlay of $300.000. It is expected that her average speed loaded will be twelve miles and light fifteen miles.

The first steel steamer drawing fourteen feet of water, intended to navigate the canal system, is lying in Lachine locks at Montreal, loading a cargo of pipes at the works of the Canada Pipe Co., for Ft. William. The vessel is under the charge of Capt. Chestnut, who brought her out from England with a salt water crew who have left her, and the captain is now engaging a Canadian crew to take her up the canals to the upper lakes. Her voyage will be the first real test of the efficiency of the canal system.

Within the last 10 days the Milwaukee rate on coal has fallen twice—first from 65 cents to 55 cents, and then to 50 cents. The Lake Superior rate is 40 cents, and the grain rates, while still steady, are in a fair way to tumble. Rockefeller managed to hold up the ore rate because he controls practically all the boats that are carrying that commodity. However, he found it impossible to keep the wild rate up, and now by turning his idle boats into the coal and grain trade he threathens to smash the tolerably good prices that are being paid.

It is now rumored that the stockholders of the White Star line are planning to build a new propeller for the Detroit-Port Huron route. The White Star line has long had an ambition to control that branch of the lake traffic, and the Tashmoo is not entirely sufficient to take care of the traffic offered her. The boat comtemplated would carry about 1,200 people and several hundred tons of freight, at about the same speed as the Tashmoo. Such a boat would add greatly to the accommodations between Port Huron and Detroit, and is thought would be a paying venture.

Penoyer Bros., of Bay City, have sold to the Calumet & Hecla Mining Co. all the pine lands owned by the Shelldrake Lumber Co. in Chippewa and Luce counties, though all but a few 40s are in the former. The tract is estimated to cut 120,000,000 feet. The deal is one of the largest ever made in upper Michigan, and the consideration was $650,000. It also includes the mill plant and docks at Shelldrake. This sale follows close on the heels of another deal by the Calumet & Hecla Co. in the eastern part of the peninsula a few weeks ago, in which the consideration was a quarter of a million. F. W. Wheeler is interested with Penoyer Bros. in the deal.

Vesselmen have been complaining about the channel in the Detroit river abreast of Amherstburg, where the contractors are at work not being properly marked. A number of vessels the masters of which claimed that they were right in the channel struck and some of them had to be docked. Mr. C. Y. Dixon, who has charge of the work at Amherstburg, sends out the following dispatch: Three light floats are kept, marking the area being improved, and vessels should pass to the westward of these lights, following the range on Elliot's point, when dredge is not on work. Duff and Gatfield and a man stationed at the south end of Bois Blanc island inform as to obstructions in time to prevent accidents.

BUFFALO.

Special Correspondence to the Marine Record.

The steel steamer Douglass Houghton arrived here this week with a cargo of 308,000 bushels of oats and 60,000 bushels of wheat, the largest cargo brought to this port.

Coal men say that there will be no change in the situation during the next few weeks. On the other hand, brokers, as well as vessel owners feel like keeping freight rates where they were and in fact increasing the rate if possible.

In the collision case of the tug Acme of the Great Lakes Towing Co. and the government steam yacht Gen. John M. Wilson, the licenses of Capt. Robert Maines, jr., and Capt. James Canniff were suspended for ten days. The board of steamboat inspectors found that both vessels were going too fast in a portion of the harbor where there is much danger of collision.

Only eight coal cargoes have been shipped up through the Welland canal since the middle of May. This traffic, once so considerable, is practically gone. A shipper who has a small lot of coal at Oswego, which he has been trying to get a vessel for, says that tonnage is so scarce there that he expects to be obliged to send it by rail to Buffalo and forward it by water from here.

The removal of vessel owner and broker John L. Crosthwaite to the coast, consequent on his organization last winter of the Atlantic Coast Steamship Co., will take place not far from the end of the present lake season. A fleet of ten or twelve steamers will be got together as soon as they can be obtained at reasonable figures. It looks now as though no more would be taken from the lakes, although if they could have been obtained satisfactorily they would have mostly been built or bought here.

Capt. Frank J. McCabe died at his home last Monday evening. He had been ill for some time. Capt. McCabe was born in Buffalo fifty-four years ago and had followed the lakes since he was thirteen years old. He had been in the Western line for the last twelve years and sailed the steamers Chicago and Boston. Capt. McCabe was a member of the Shipmasters' Association. Capt. McCabe was well known and highly respected by all with whom he was brought into contact. I have heard expressions of regret at his demise at all the offices that I have visited this week.

As the excursion season advances the Saturday and Sunday crowds that go on the boats to the several resorts hold very large. The half dozen boats that are in the business carry thousands of people to Crystal Beach, Woodlawn Beach, Elmwood Beach, the Bedell House, Port Colborne and other resorts. The warm weather makes a trip on the lake or river very enticing. There was a big load of excursionists on the handsome steamer City of Buffalo on the round trip to Dunkirk. This trip is increasing in popularity and attracts those who wish a long ride on a comfortable and speedy boat.

The general decline of coal freights to all Lake Michigan ports is in line with the generally weak condition of all lake freights. But for the scarcity of tonnage all the season the comparatively high rates on coal could not have been maintained so long. As it is vessels in the coal trade have made money. Freight rates are: Chicago, 50 cents; Duluth, 40 cents; Milwaukee, 50 cents; Portage, 50 cents; Ashland, 40 cents; Depere, 50 cents; Racine, 60 cents; Gladstone, 40 cents; Sault, 50 cents; Toledo, 40 cents; Bay City, 40 cents; Marquette, 50 cents; Kenosha, 60 cents. The past week's shipments amounted to 56,000 tons of which Chicago took 22,000 and the head of the lakes 15,000 tons.

One of the most important wrecking jobs ever undertaken in deep water on the lakes will be the contract the Donnelly Wrecking & Salvage Co. has taken to raise the steamer Oconto. The wreck lies in 105 feet of water, opposite the Thousand Islands park on the St. Lawrence river. At the time she was lost the Oconto was laden with general merchandise. She struck a shoal and then slid off into the deepest part of the river. That was ten years ago, and this is the first move to recover the steamer and cargo. The insurance was held by Smith, Davis & Co., who have just awarded the contract to the Donnelly company, of Kingston, Ont. The Donnelly company is an old established firm and has done many good jobs of wrecking work. The founder of the firm, John Donnelly, died recently. His two sons, Thomas and John, have been the active managers of the business for some time and will continue it.

No railroad in the United States offers as fine an opportunity for study of the old canal system of the East as the Lackawanna railroad. For miles its track follows the old Morris & Essex canal, built before the railroad was dreamed of for the purpose of transporting coal from the mountains to the great city of New York. A canal in a mountainous region is a thing of wonder, and the traveler has numerous opportunities of viewing the curious machinery by which the canal boats are drawn up the hills on railroads to strike the canal on a new level, or lowered from the canal from a higher level to continue farther down the mountain. This old canal, though grass-covered and bordered by the most magnificent shrubbery, is still used, and the traveler sees from time to time one of the old boats moving slowly through the limpid waters, with sleepy mules for motive power.

CHICAGO.

Special Correspondence to The Marine Record.

Grain rates remain at 2 cents, although one big shipping house was offering but 1¾ cents.

Grain freights continue active on the basis of 2 cents on corn to Lake Erie ports and 1½ cents to Port Huron and Sarnia.

The steamer Sir William Siemens loaded 225,000 bushels of corn at South Chicago, Saturday. This was one of the largest grain cargoes ever taken out of that port.

The Graham & Morton Trans. Co's. steamer Mary proved her excellent sea-going qualities whilst crossing Lake Michigan last Friday in one of the heaviest gales this season.

The Calumet Grain and Elevator Co. is driving piles for a foundation to an extensive addition to their elevator between Ninety-fifth and Ninety-sixth street, South Chicago.

Work on the superstructure of the new Baltimore & Ohio bridge at Ninety-sixth street, South Chicago, has begun. The foundations are all in and the girders and other structural material are already on the ground.

The steamer Thomas Maytham, recently ashore off Milwaukee, is in the Chicago Ship Building Company's dock at South Chicago, for repairs. Sixteen of her bottom plates were broken, and repairs will approximate $8,000.

Stocks of grain in Chicago public and private elevators decreased 2,331,000 bushels last week. The elevators now contain 26,118,000 bushels, as follows: Wheat, 14,255,000 bushels; corn, 7,486,000 bushels; oats, 4,027,000 bushels; rye, 350,000 bushels; barley, 50,000 bushels.

The steamer R. J. Gordon, Capt. Joseph Smith, master and owner, which was rebuilt by her owner after having been badly damaged by fire when laying at her dock at the lake front last fall, is now running between South Haven and Chicago in the fruit and passenger business.

Contracts for the new bascule bridge at Ninety-fifth street, South Chicago, have been let by the city to Roemheld & Gallery for $98,500. City Engineer Walter Cahill has completed the running of the base line for the structure, and Lydon & Drews are dredging and pulling out the old piling.

J. S. Morton, secretary of the Graham & Morton Trans. Co., is now attending to the East shore business of the company. President J. H. Graham is devoting the greater part of his attention to the establishment of the line to Kenosha and Waukegan and to the Lincoln Park run of the steamer May Graham.

The tow line of the Lehigh Valley liner Tuscarora parted just as she was swinging at Collision bend, near Twenty-third street on Wednesday, and the steamer crashed into the tug F. O. Earnshaw, lying at the dock. The tug was damaged to the extent of $200. The accident was due to the current in the south branch.

The Great Lakes Towing Co. has paid the first fine ever collected from a tug owner by the city of Chicago out of the hundreds of cases brought under the smoke ordinance. The trust handed over $15 assessed against the tug Dickenson for making everything black on the river the other day. During the past decade the numberless fines assessed against tugs have been appealed and were never heard of again.

Capt. Myles Barry's schooner Sophia Minch, has been at last released from the beach off Ashtabula Harbor, Ohio, and will be towed to Cleveland and go into dry-dock. She was released by Capt. James Reid, the well known wrecker of Bay City, after having been on the beach about one year. Several thousand dollars have been spent in releasing her. The Minch formerly belonged to the Minch Transit Co. and was purchased by Capt. Barry after she went ashore.

Geo. B. Carpenter & Co., 202-208 South Water street, Chicago, Ill., the pioneer shipchandlers and sailmakers, of this city, and the largest house in that line on the Great Lakes, are circulating some very elaborately illustrated catalogues which give the extensive line of goods that company manufacture and deal in—consisting of sails, tents, anchors, capstans, swings, nets, folding chairs, etc. They do a large business outside of their immediate territory, as is shown by the fact that they make shipments to all parts of the country and abroad. They are also large contractors for government work, such as tents, etc., their first contract being for tents used during the Mexican war, and the last, which was received a few days since, was for 75,000 pairs of army leggings for shipment to the Philippines. This house was established as far back as 1840.

"Business in the carrying of ties, cedar posts and poles from the north shore of Lake Superior to Duluth is booming, and more lumber has been sold in the last week on Lake Superior to go to Lake Erie than for any previous week in six months," said S. R. Chamberlain, who has just returned from a ten days' business trip through the northwest. "They are paying 10 cents for carrying ties sixty to 120 miles along the north shore into Duluth, and they can get all the men they want to load them at 25 cents per hour. On this lake the best we can get for carrying ties 325 miles, from Cheboygan to Chicago, is 6 cents, and we have to pay 60 cents per hour for handling. I have put my tow into the lumber carrying trade from Lake Superior to Lake Erie, and the boats will not be seen on Lake Michigan again this year. The trade on this lake seems absolutely dead."

DULUTH—SUPERIOR.

Special Correspondence to The Marine Record.

The steel steamer I. W. Nicholas is now carrying package freight between Buffalo and Duluth for the Lehigh Valley company.

Frank Bagley, of the steamer William Chisholm, broke his leg, and was taken to St. Luke's hospital, where he is resting easily. His leg was caught between the fenders and terribly mangled. His home is in Cleveland.

The elevator capacity at the head of the lakes is to have another increase. The Great Northern road will tear down its elevator, which is a wooden structure, with a capacity of 1,750,000 bushels, and on its site will put up a modern steel elevator, with a capacity of 2,500,000.

The situation as regards lake freights is quiet and unchanged. The average movement of wheat is about 1,000,000 bushels a week and stocks are now down to less than 10,000,000 bushels. The liners are taking nearly all of the grain offered, as the rate, two cents, is not sufficiently attractive for the wild boats.

The steel steamer William P. Palmer was enrolled at the local customs office yesterday. The vessel belongs to the American Steamship Co., with A. B. Wolvin vise president and managing owner. She was recently built at Cleveland and is 242 feet long, 43 wide and 26½ feet in depth, with a gross tonnage of 2,293. Net tonnage, 1,609.

The Bessemer steamer Douglas Houghton carried the largest grain cargo out of Manitowoc that has ever been carried on the lakes. She took 368,000 bushels of oats. The record which was held by the Wilson line steamer Andrew Carnegie loaded 332,100 bushels of oats last year. The Houghton's cargo was shipped from the Northern Grain Company's elevators A and B.

The Duluth grain market is dull and we hear that the Chicago market is not as active as it was. The corn rate to Buffalo holds at 2 cents. Medium sized vessels are in fair demand, but cargoes for the big Rockefeller vessels are not very plentiful, but the boats of that fleet will not break the rate, as they will be kept off the market as soon as it shows any sign of weakening at this end of the route.

Lumber is quiet. Down at the Lake Erie yards there is but little call for stocks, and the hookers are mostly all engaged in the ore business. On the face of it lumber-carrying pays better than ore, but after all charges are settled up, the man who carries ore at the present going rate has more money left than had he taken lumber. The going rate on the latter is $2.25 out of Lake Superior.

The wheat at Duluth was reduced 1,000,000 bushels during the week. There are now 10,000,000 bushels in the elevators there. Last year 8,500,000 bushels of flax went through the Duluth market. The coming crop will probably witness receipts aggregating 12,000,000 bushels. Friday 200,000 bushels of oats were sold at Duluth. The government was the purchaser, and will probably export it to China.

An order by Judge Lochren was filed in the United States court yesterday, in the admiralty case of Cody & Addis vs. the tug E. T. Carrington, directing the Fidelity Deposit Co., of Maryland, to show cause why judgment should not be rendered against it on its surety stipulation in the case mentioned. On June 11 a judgment was rendered against Cody & Addis for $313.10, for which the Fidelity Co. was surety.

The situation as regards lake frieghts is quiet and un changed. The average movement of wheat is about 1,000,000 bushels a week and stocks are now down to less than 10,000,000 bushels. The liners are taking nearly all of the grain offered, as the rate 2 cents, is not hardly payable for the wild boats, or as we term unchartered tonnage; though, there is nothing wild about them. It is also possible that these bottoms would be spoken of as "tramps" if they were down on the coast.

The consummation of a large deal, whereby the Lake Superior Consolidated iron mines become the sole owner of the Rouchleau Ray property on the Mesaba range, was reached a day or two ago, by the filing with the register of deeds at Duluth, of the instruments transferring the undivided half of the property. The property in question since the first discovery of ore deposits, has been considered of great value, and it is said that not many years ago it would have required an immense amount of capital to even tempt the owners to sell. Just what particular significance attaches to the transfer as made could not be ascertained, but it is likely that it will have a tendency to greatly stimulate the mining industry on the range.

Capt. Alex. McDougall has returned home from Collingwood, Ont., and St. Louis, Mo., where he had been in connection with the shipbuilding matters, in which he is largely concerned. The affairs of his company are being rushed at both points as rapidly as possible, and the yard at Collingwood will be in shape to begin active operations in about two months. "The yard at Collingwood will be one of the finest in the entire country," said Capt. McDougall, "although it will not be as large as some others. It will be equipped to construct any style of vessel, either iron or wood, and as soon as completed boat-building will begin at once. At the St. Louis yards boats are rapidly nearing completion and three of them will be launched within a very short time. Aside from this we have nothing to give out for publication at the present time." Capt. McDougall said he would remain here about two weeks, after which he would make another eastern trip.

President C. M. Schwab, of the Carnegie Steel Co., and James Gayley, George Lauder, Judge J. H. Reed, Thomas Lynch and D. M. Clemson, members of the board of directors of the company, arrived at Duluth Saturday evening on the North Land, and after stopping a short time took a special train over the Duluth, Missabe & Northern for the ranges, where they will make an inspection of the properties in which they are interested. President Schwab said: "There is much less to worry over in the iron market than has been generally supposed by the public. The prospects are good for a general revival, as the demand has been stimulated by lower prices which now prevail. I look for steel and iron industries generally to run very steadily from this time on."

The Youghiogheny & Lehigh Coal Co. tested, this week, the new apparatus at the East End dock. The first boat which has brought coal there for over a year was unloaded slowly. There are three rigs to be tested. The machinery is of the latest pattern and clam shell coal buckets carry about 2,500 pounds of coal each. This dock is the only one having this kind of rigging at the head of the lakes. Being new, the machinery worked slowly at first, and many small repairs and changes were necessary to get everything into good working condition. The concrete work at the dock is still uncompleted and a force of men is working there. The receiving of coal will continue more or less right along, however, and before long the dock will be handling a large amount. Eventually it is to hold upward of 200,000 tons. The old dock held but 60,000 tons.

J. J. Hill's handsome steam yacht, Wacouta, arrived from Buffalo this week. The Wacouta is easily the finest craft of her class on fresh water. She represents $1,300,000 including her furnishings, which are luxurious. The yacht is built of steel throughout and is fitted with triple expansion engines and two boilers of the Scotch type. She measures 232 feet over all, 208 feet on the water line, 32 feet beam, 17 feet 5 inches depth of hold and 14 feet draft. She is bark rigged and carries 10,935 square feet of canvas. Her deck house and interior plan give her an abundance of living rooms. The Wacouta, formerly known as the Eleanor, was purchased by Mr. Hill from Mrs. James W. Martinez-Cardezo of New York. The boat was built by the Bath, Me., Iron Wks. in 1894. Her registered measurement is 1,138 tons. The crew numbers 53 persons, including the servants. Capt. George A. Minar, formerly master of the steamship North West, is in command of the Wacouta.

CLEVELAND.

Special Correspondence to The Marine Record.

Capt. James Calbick, Chicago, was among the visitors here this week.

The steamer Rube Richards came in here on Monday and went into dry-dock for repairs.

It is reported that Capt. L. B. Cummings has been relieved of the command of the steamer Thomas Maytham.

The steamer Simon J. Murphy, of the Eddy-Shaw fleet, on her first trip loaded 247,000 bushels of wheat at Duluth for Buffalo.

The tug Matt H. Esser, built at Lorain by H. D. Root for Capt. Burke, of Erie, was succesfully launched at Lorain, on Tuesday.

The steamer Rensellaer will be launched at the old Globe ship yards, Thursday afternoon at 2 o'clock. She is 474 feet over all.

The steamer Harvard is carrying some large cargoes. One day last week she carried to Ashtabula 6,822 tons of ore from Duluth.

A complete electric light plant is being installed on the propellor Pascal P. Pratt at the yards of the American Ship Building Co., Lorain.

Capt. George Butterfield, an old tug man of Toledo, is dead at Jacksonville, Fla. He was 76 years old and was one of the first tugmen in Toledo.

The schooner Sophia Minch, which was pulled off the beach near Ashtabula Monday, was towed here on Tuesday and placed in the lower drydock.

Bids were opened Saturday afternoon in the office of Col. Jared A. Smith, for work on removing and rebuilding a section of the old west pier at Huron.

A Washington report states that Capt. Moore, of the revenue cutter Winona, stationed at Mobile, Ala., is to succeed Capt. Hodgsdon as captain of the Fessenden.

The schooner George Corliss, of the Bessemer fleet, which has been tied up to the east breakwater for the past month, cleared for Erie yesterday, where she will be laid up.

When the steamer North West left here on her last up trip for Duluth, she had every berth and every stateroom taken. This was the biggest sailing in the history of the company.

The big steel steamer building at the Jenks yard at Port Huron, for the Wilson Transit Co., and which will be named Capt. Thomas Wilson, will be launched about September 1.

The steamer Edward Smith No. 2, which was burned off Avon Point and was raised again and brought into port Sunday, discharged her cargo and was taken into dry-dock for repairs.

The steamer Princeton, being built for the Pittsburg Steamship Co., will be launched from the yards of the American Ship Building Co., Lorain, on Saturday instead of Friday as at first intended. The launch is scheduled to take place promptly at 12 o'clock. Capt. Frank Rae, of Vermillion, will sail the new steamer.

Very little Milwaukee coal has been covered by freight contracts, and dealers are somewhat inclined to hold off until they are satisfied that bottom in carrying charges has been reached.

Capt. James Corrigan has offered a liberal reward for the bodies of his two daughters, and if they are picked up by a vessel and brought to Cleveland he will also pay for any time that may be lost by the boat.

The ore market is in about the same condition it has been for the past week or ten days and there is no change in sight. There are not many vessels on the market and the demand for chartering is considered light.

The Pittsburg Steamship Co.'s steamer Princeton will be launched at the Lorain yards of the American Ship Building Co. Saturday at noon. The new boat will be christened by Miss Katherine Reed. Capt. Frank C. Rae, of Vermillion, will sail the Princeton.

The Shelby Cold-Drawn Steel Tube Co. have issued a handsome booklet in which they state their claims of the seamless tube as compared with the lap-welded tubes. They supplement their remarks with a list of the names of 56 battleships, cruisers, gunboats, torpedo boats, etc., of the U. S. Navy, in which the Shelby boiler tubes are used.

Coal rates to Lake Michigan ports were marked down 10 cents this week, making a cut of 25 cents in the Milwaukee rate since the shippers started to fight for lower rates. Tonnage is offered freely at all Lake Erie ports, and with the demand light the shippers are having things their own way. Charters were made at 40 cents to Milwaukee and 30 cents to Gladstone.

The schooner Sophia Minch, which was on the beach at Ashtabula for over a year, was placed in dry dock this week. She was found to be in good condition. Her bottom did not suffer much and repairs on her will be completed Saturday night. She will get a new rudder, stern post, a few bottom planks and will be recalked. The Minch will tow with Capt. Barry's steamer Gordon Campbell in the ore and coal trade.

The burned steamer Ed. Smith will be placed in one of the upper dry docks. Capt. George McLeod, of Buffalo, who is looking after the work for the underwriters, says that it will take about two months to complete repairs on the Smith, and that the work will cost at least $20,000. Her machinery is in very bad shape and will all have to be taken out and sent to the shop. Her engine was built at Detroit and it will be sent there for repairs.

The American Ship Building Co., controlling practically all of the shipyards of the Great Lakes, is the first of the large industrial organizations to make, at the end of a year's business, a comprehensive statement of its affairs. Mr. W. L. Brown, of Chicago, who is at the head of this organization, has said that it would be his aim to conduct the consolidated yards on business principles equal to the best that prevailed in any of the several smaller companies previous to the consolidation.

Lake Michigan coal cargoes are not offered freely, but tonnage for Lake Superior ports is in fair demand and a number of vessels were chartered for the head of the lakes at 40 cents. There are not many vessels on the market, as most of the Lake Superior traders that usually take up cargoes have contract coal. The supply of wild ore tonnage is about equal to the demand and rates are unchanged at $1 from the head of the lakes, 90 cents from Marquette and 70 cents from Escanaba.

The freight market is again quiet and very little coal or ore tonnage is being chartered. No futher changes in rates were made. Lake Michigan coal cargoes are very scarce and it is just as difficult to place boats now as it was before the rates were cut to 40 cents to Milwaukee and 30 cents to Gladstone. Tonnage for Lake Superior ports is in fair demand and the rate holds steady at 40 cents, and the opinion is that there will not be much of any change in that rate, for at least this week, although everyone feels certain that the Lake Superior rate ought not to fall below 50 cents.

KINGSTON, ONT.

Special Correspondence to The Marine Record.

The schooner Madcap, sunk lately at Genora, has been raised and is dry docked at Picton.

The Calvin Co.'s rafts which were stranded in the Cedars on Saturday were successfully taken off and are now at Quebec.

The tug M. M. Drake, of Oswego, is in Davis dry dock being rebuilt. She was lately purchased by Capt. Logan, of Montreal.

The propellor Algonquin, after unloading grain for the Montreal Transportation Co., left on Friday for Cleveland to load railroad iron for upper lake ports.

Capt. Estes, for forty years a captain on St. Lawrence river steamers, has been given command of the fast little passenger steamer Unique.

The passenger steamer Argyle broke a wheel eccentric on Thursday when near Picton and repairs were made and the vessel proceeded to Thousand Island park the same night.

The Calabogie Mining Co. has received a contract to supply 10,000 tons of ore to the Midland Furnace Co. of Midland, Ont., and the first shipment of 200 tons was sent along yesterday. The ore will be shipped by K. & P. to this city, and then by G. T. R. to Midland.

THE ST. LAWRENCE ROUTE.*

The first canals of Canada were constructed for military purposes, and by royal engineers. They were the direct result of the American Revolution. During this war there were about six thousand troops in the Great Lake region who depended upon Montreal for supplies, no fewer than 670 boats being required to transport provisions in six months. These batteaux sailed in brigades of ten or a dozen to aid one another in surmounting the sluicing cataracts of the upper St. Lawrence, particularly the Long Sault, which required an entire day to ascend. This was an object lesson not lost upon the authorities, and improvements were begun at these rapids in 1779 by Capt. Twiss, R. E. The first canal was begun at Coteau du Lac, the first plan being to make the lock walls of timber, but they were subsequently made of masonry. It was begun in 1779 and completed by 25th October, 1780, with three locks and iron flood gates. The locks were forty feet long, six feet wide and less than thirty inches of water covered the sills. It would have been useless to make them deeper without undertaking a much greater length of canal. Mr. de Longueuil, who had built a mill a liitle above the Cascades, had thereby somewhat improved navigation, but Capt. Twiss further improved the canal here, which was designed merely to overcome the current, and he was shrewd enough to make Mr. de Longueuil defray part of the expenses. In 1781 work was begun on canals at the Cascades and Cedars, and the Split Rock channel was deepened. Cornish miners were employed upon the various rock cuttings and blasting work, which was carried on in various dangerous places throughout the series of rapids, dangerous rocks being blown to atoms. The Cascades canal was at Cascades Point, where a shallow and rapid channel discharges from the St. Lawrence into the Ottawa, known as Les Faucilles, between the main river and Ile le Moyle. It was a batteau canal with two locks, and about 200 yards long. The Split Rock canal was at a point where the current is greatly accelerated by the projection into the stream of Point au Buisson, on the southern bank. The remains of this lock are still to be seen.

These canals were all batteau canals. The batteau had about the dimensions of the Venetian gondola, but there the resemblance ended. It was built of pine wood, about 5½ feet beam, 35 feet long, was flat bottomed, pointed at both ends, and drew very little water. A batteau containing 25 persons, their baggage, and 25 barrels of flour, is said by a traveler of the time to have drawn only eight inches. But this must have been a very large batteau, as the average batteau load was 30 barrels of flour and the crew of four or five men. When these canals were constructed the annual traffic on the upper St. Lawrence to Carleton Island amounted to from 240 to 320 batteaux. On the completion of the Coteau du Lac Canal, Twiss imposed, with the cordial consent of the merchants, a toll of ten shillings currency per batteau, increased to twenty-five shillings when the series of canals was completed. Ten barrels of flour being reckoned as a ton, we find that the early canal tolls were $1.66 per ton. The present rate on the Beauharnois canal, which replaces these canals, is $0.15 per ton.

The canals remained in this condition until 1800, after the formation of Upper Canada, which took place in 1793. The effect of the improvement in the rapids is well shown by the toll receipts, although we must not forget that Upper Canada was being rapidly populated by exiled United Empire loyalists. In 1781 some 263 batteaux, two canoes and one boat used the Coteau canal. The tolls for a time declined, probably because no ships were permitted upon the Great Lakes, except the king's vessels, but subsequently increased and in 1799 were double what they had been in 1795. By 1800 the traffic was so great that improvements were demanded, and although to detail these here is to trespass upon our third period, it may be well to do so and complete the history of canals at this point prior to the Union. In 1800, Col. Gother Mann proposed to increase the capacity of these canals. The Coteau canal was to be widened to 9½ feet in the lock gates, the lock itself to be widened four feet and the canal prism two feet. This would make the locks ten feet wide, and the dimensions are from the report of our archivist, although Mr. Keefer in his admirable monograph on the canals of Canada states that they were enlarged to twelve feet. So also the two differ as to the length of the locks, which Mr. Keefer places at 110 feet and Dr. Brymner at 120 feet, the first probably allowing for the opening of the gates. Col. Mann proposed to replace Mill rapid and Cascades canals by one canal across a neck of land from the St. Lawrence to the Ottawa about 900 yards above the Cascades, and 300 yards wide. His suggestions were accepted and work was commenced, the work being completed by 1805. Old documents enable us to estimate the depth of the enlarged canals at 3½ feet, and Mr. Keefer places them at four feet. Rock cutting was here encountered, the first of importance since the ill-fated French Lachine canal.

The Durham boat was introduced after the war of 1812, and compared with its predecessors it was a leviathan. How the habitant must have swelled with pride to see a ship ascend the St. Lawrence with ten times the capacity of the early batteau. The Durham boat was flat-bottomed, with keel and centerboard, rounded in the bow and decked at bow and stern with a wide gunwale running its entire length for purposes of poling. Its capacity was 350 barrels of flour, or 35 tons. To accommodate these vessels it was necessary to further enlarge the canals in 1817, to 12 feet between the gates. By that time nearly 900 batteaux passed the canals annually, and in 1833 some 863 batteaux and 612 Durham boats carried the trade of the Upper St. Lawrence. In the early days the western country had to be fed from the east. Where now waves the golden wheat of Manitoba the traders were exposed to starvation if the supply boats did not arrive at the grand portage in due season. The first shipment of wheat from Chicago did not take place until 1838. This must be borne in mind in connection with what I now propose to review, the struggle for supremacy on the Great Lakes between the navy and the fleets of commerce. Before describing this struggle, however, it will be desirable to review briefly the history of the great fur-trading days, in order to show the volume of commerce that depended upon the result.

In 1802 the Montreal Northwest Fur Company had 117 trading posts, 20 partners, 161 clerks and interpreters, 877 common employes, in addition to 100 free hunters and 540 canoe men on the Ottawa. The London sales of 1801 were £371,139 stg. and they paid £22,000 stg. in duties. In 1780, according to Charles Grant, the trade from Montreal was from 90 to 100 canoes, and the furs brought down were estimated at £200,000, or $8 per capita of the population. Each canoe load cost £300 stg. in England. The freight charges across the Atlantic were fifty per cent. To transport it from Montreal to Machillimackinac cost fifty per cent. more on the original price, so that each canoe load was valued at over £7.0, much over $3,500 as compared with the present day; no inconsiderable treasure to trust to the rush of impetuous rapids day after day for weeks at a time. The work of the voyageur was highly specialized. His skill has not entirely passed from amongst us, but it is not now an integral portion of the trade of the day. He engaged as "devant" or in the bow, or gouverneuil, that is as steersman, or, if not quite so skilled as the others, as milieu or in the midships seats. The pole was quite as much in vogue as the paddle, and any one using it had to keep the bow true against the current, or the boat would be swept round and capsized, perhaps where no man could fall and live.

In connection with cost of transportation I may say that the Hudson's Bay route was 25 per cent cheaper to the interior in those early days, that is it was 75 per cent. of the original price. Some three hundred men were employed west of the carrying place, men who exposed themselves to hostile Indians, to rapids and starvation so keen that cannibalism was not unknown among them. They straggled from the peaks of the Rockies, from the shores of the Saskatchewan and from the far north, even from the Mackenzie River, back to the carrying place between 10th June and 10th July each year, laden with rich furs, but with scarcely a mouthfull of food, and if the supply canoes were delayed the results were terrible to think of. It was this that made the conflict for supremacy upon the lakes so bitter, and which ultimately led to the triumph of the merchants.

In 1755 the Brltish built two sloops at Oswego on Lake Ontario, naming them after lake and site respectively, and in the same year General Shirley placed a sloop and schooner each of ninety tons, on the same lake, in addition to a number of whale boats and galleys, which we might call batteaux. After the Conquest merchants began to establish themselves to tap the rich fur routes, and Oswego was for some years the most important fur trading post on the continent. The Lake Superior copper mines attracted the attention of English capitalists and in 1770-71 a sloop of 40 tons was built at Point aux Pins and sailed to Ontenagon. There was no difficulty in opening up the fur trade, so far as navigation of the lakes was concerned, until the outbreak of the United States revolution, almost immediately after which all private trade on the lakes was prohibited, and merchants' goods were permitted to be transported only on the king's ships. One may grumble, but should not unduly complain at the hardships which war imposes upon trade, and the merchants of Canada, while very much put out by the new regulation, bore it with some equanimity until peace was restored, but while the number of ships of the navy was reduced to two ships on each lake after the war, the authorities refused to accord the merchants their former rights of free navigation. Then the storm broke. The merchants did all in their power to make the authorities see reason. They even offered to have their vessels commanded by a naval officer and pay his salary. Haldimand, on the other hand, thought it sufficient to place a third war vessel on Lake Ontario and Lake Erie. It will save time to quote Haldiman's own words in connection with the matter:

"The navigation of the Great Lakes by the King's vessels only," he said, "is an object so nearly connected with the entire preservation of the fur trade, that I have withstood various applications for building and navigating private vessels and boats upon the lakes; the rivers and outlets from them to the American States are so numerous that no precautions which could be taken in that case, would be effectual in preventing a great part of the furs from going directly into the American States. * * * I would therefore recommend by all means that a sufficient number of King's vessels be kept up on the lakes, and all other craft whatever prohibited not only for foregoing reasons, but in all events to preserve a superiority upon the waters of that country."

That sufficient of the King's ships were not kept up on the lakes is indicated by the fact that in 1784 the goods intended for the interior trade were so long delayed at Kingston and Niagara that they could not be sent forward, while on the 16th July, 1785, there was little, if anything, short of 100 batteaux loads of goods to cross Lake Erie, besides thirty or forty loads at Kingston. Some of these goods have been awaiting transport for twelve months. Benjamin Frobisher put the case of the merchants in a nutshell when he wrote, sending a memorial: "All the company (N. W. Fur Co.) wishes for is on any terms to be left to the management of its own business." The merchants of Detroit (then under the British flag) declared that they were paying £3,700 stg. interest upon the goods detained at Carleton Island, and that the action of the government would involve them in ruin. It required five years in those days to begin and complete a transaction in furs in Canada. The goods were ordered from England in one year, they came out the following year, went west the third year, the furs for which they were bartered reached Montreal in the fourth year and were sold in London in the fifth year, during all of which period interest was accumulating. An extra year's delay meant a great deal to the merchants, many of whom went into debt for their goods.

By 1785 a relaxation in the regulation was made by St. Leger at Detroit, and merchant vessels were once more spreading their sails on the lakes in 1791. The York, one of the pioneers of the now gigantic fleet, was launched at the mouth of the Niagara in 1792. One of the historic vessels of the lake trade was the Beaver, built in Detroit in 1784. She was built for the navigation of Lake Superior, by the North-West Fur Co., but could not be got up the Sault Ste. Marie. As the company declared that she was built at inconceivable cost ($7,374), and altogether looked upon her as a phenomenon, you may like to learn her dimensions. She was 34 feet long in the keel, 13 feet beam and 4 feet deep in the hold. On Lake Superior to-day are vessels exceeding 300 feet in keel length, 42 feet in the beam, and drawing 16 feet; I am speaking of the Pope, which has carried 126,000 bushels of corn, weighing 3,527 tons. In 1797, by the way, was launched the first United States vessel on Lake Erie, the Washington, which was after one season bought by a Canadian, taken on wheels—you can imagine her size—around the Niagara Falls, and sailed for Kingston from Queenston in 1798 as the Lady Washington.

*Abridged by the author, Arthur Weir, B. Sc., from a lecture delivered before the Applied Science students of McGill University, Montreal, January, 1899, and published exclusively in The Canadian Engineer.

THE Washington correspondent of the Philadelphia Record says: "Some time during the present summer a new airship will be launched from the Army's new Signal Corps post at Fort Myer. It is the invention of Lieut. Von Siegsfeld, a Prussian, from whom it was lately purchased through our military attache at Berlin. It is an airship embodying principles distinctly new to the American school of war aeronauts, in which it is expected to effect a revolution."

THE STARS AS TIMEKEEPERS.

Probably the majority of people suppose that the observatories obtain the correct time from the sun. When the average man wishes to give his watch the highest praise, he says, "It regulates the sun," not being aware that a watch which would keep with the sun around the year would have to be nearly as bad as Sam Weller's. The farmer may safely decide when to go in to dinner by the sun, but if the mariner was as confident that the sun marked always the correct time as the farmer is, he would be sure to be at times two or three hundred miles from where he thought he was. In other words, the sun—that is a sundial—is only correct on a few days in each year, and during the intervening times gets as far as a whole quarter hour fast or slow.

These variations of the sun from uniform time caused no end of trouble between the astronomers and fine clock-makers before it was discovered that sun time is subject to such irregularities. The better the clock, the worse it often seemed to go. But as the variations in the sun time are now accurately known, correct time might be obtained from the sun by making proper allowance, were it not for the difficulty of observing its position with sufficient exactness. The large disk of the sun cannot be located so perfectly as can the single point which a star makes. For this reason astronomers depend almost wholly upon the stars for obtaining accurate time. It is the method of doing this which we propose to describe.

There are several hundred stars whose positions have been established with the greatest accuracy by the most careful observations at a number of the principal observatories of the world. If a star's exact position is known, it can readily be calculated when it will pass the meridian of any given place—that is, the instant it will cross a north-and-south line through the place. The data regarding these stars are all published in the nautical almanacs, which are got out by several different observatories for the use of navigators and all others who have uses for them. These stars are known as "clock stars."—Appleton's Popular Science Monthly for December.

FAMOUS CLIPPER SHIPS.

A writer in the London Shipping World speaks of a painting of the famous clipper ship Red Jacket, of the Liverpool White Star Line of Australia packets. She was American-built, which brings my memory back to the famous Aberdeen clippers which populated Australia. "I can see them now at the North Quay, in the London docks, the Ninevah, Jericho, Centurion, Jerusalem, Maid of Judea and Star of Bethlehem. Ahead of them was the Pioneer, Montreal and Quebec packets, the John Bull (true Briton), City of Hamilton, the ship I made my first voyage across the Atlantic with Capt. Hardy and David Dalycrimpe, both afterwards masters of ocean passenger steamships. Then astern of the White Star ships lay the American transom ships that brought two-thirds of Ireland to America, the Cornelius Grinnel, Concord, Hathaway, Congress and Northumberland. She foundered on the west coast of Ireland, all hands lost. Memory takes me further back. I can see the high-pooped quarter galleried East Indiamen, fitted up like palaces, with their decks full of six-pounders and cannonades, bay windows on their stern, with flower pots, like an Antwerp of Ostend packet. Further back can see the keels laid and launching of the famous China tea clippers, sharp as razors, narrow and deep, sparred like a two thousand ton ship, the Staghound, Greyhound, Robin Hood, Red Riding Hood, with full sized figure-heads."

THE New York Journal of Commerce, referring to the activity in shipbuilding along the lakes, believes that when the current contracts are completed there will be a cessation of the present boom unless conditions of the market change marterially. A lake line manager is quoted as follows: "Vesselmen are waiting for a reduction in the cost of building, which is sure to come when the present rush is over, if not before. It is a well known fact among vessel owners that shipbuilders are even now nibbling for contracts on boats to be completed the forepart of next season at a reduction of at least 20 per cent. from the present highest price. The lines are not actually forced to build, though nearly all of them feel the need of strengthening their fleets, and they will wait until prices get down something like a normal condition. Vesselmen confidently expect to be able to place contracts for new vessels at as low a price as they have ever been built for. They do not expect a long wait either."

LLOYD'S REGISTER SHIPBUILDING RETURNS.

(FOR THE QUARTER ENDED 30TH JUNE, 1900.)

From the returns compiled by Lloyd's Register of Shipping it appears that, excluding warships, there were 499 vessels of 1,265,313 tons gross under construction in the United Kingdom at the close of the quarter ended 30th June, 1900.

The present return shows an increase in the tonnage under construction of about 5,000 tons, as compared with the figures for last quarter, but a reduction of about 135,000 tons as compared with the unprecedentedly high total which was reached in December, 1898.

Of the vessels under construction in the United Kingdom at the end of June, 420 of 1,001,415 tons are under the supervision of the surveyors of Lloyd's Register with a view to classification. In addition, 55 vessels of 216,032 tons are building abroad with a view to classification. The total building at the present time under the supervision of Lloyd's Register is thus, 475 vessels of 1,217,447 tons. Details of this total follow:

	No.	Gross Ton.
Building in United Kingdom for home account, for sale, etc.	346	791,873
Building in United Kingdom for foreign and colonial account	74	209,542
Building abroad for United Kingdom owners	3	638
Building abroad for foreign account	52	215,394
Total building on 30th June for classification in Lloyd's Register book	475	1,217,447

The following table apportions the vessels now under construction in the United Kingdom to the countries for which they are being built:

COUNTRY FOR WHICH INTENDED.	STEAM.		SAIL.		TOTAL.	
	No.	Gross Tonnage.	No	Gross. Tonnage	No.	Gross Tonnage.
United Kingdom	342	937,849	18	12,022	360	949,871
British Colonies	18	17,727	1	170	19	17,897
Argentine	1	130	...	.....	1	130
Austria-Hungary	15	43,671	...	.....	15	43,671
Belgium	2	5,820	...	.....	2	5,820
Brazil	6	1,720	...	.....	6	1,720
Chili	2	3,560	...	.....	2	3,560
China	1	1,700	...	.....	1	1,700
Denmark	2	3,840	...	.....	2	3,840
Egypt	2	200	1	270	3	470
France	6	12,950	...	.....	6	12,950
Germany	19	85,128	...	.....	19	85,128
Hawaii	...	.....	1	1,400	1	1,400
Holland	8	43,980	...	.....	8	43,980
Japan	4	1,630	...	.....	4	1,630
Norway	1	1,340	...	.....	1	1,340
Portugal	1	460	...	.....	1	460
Russia	5	13,150	...	.....	5	13,150
Spain	2	6,738	...	.....	2	6,738
United States	2	3,350	...	.....	2	3,350
Foreign (country not known)	2	900	...	.....	2	900
For sale or Nationality of owners not stated	32	64,995	5	613	37	65,608
Total	473	1,250,838	26	14,475	499	1,265,313

The following table shows the vessels under construction in the United Kingdom classified according to gross tonnage:

TONNAGE.	NUMBER.	
	STEAM.	SAIL.
*Under 50 tons	.....	3
*50 to 99 tons	8	6
100 to 199 tons	75	6
200 to 499 tons	73	6
500 to 999 tons	34	.....
1,000 to 1,999 tons	42	3
2,000 to 2,999 tons	34	.....
3,000 to 3,999 tons	91	2
4,000 to 4,999 tons	50	.....
5,000 to 5,999 tons	19	.....
6,000 to 6,999 tons	18	.....
7,000 to 7,999 tons	7	.....
8,000 to 8,999 tons	2	.....
9,000 to 9,999 tons	5	.....
10,000 tons and above	15	.....
Total	473	26

*Vessels of less than 100 tons are not included in Lloyd's Register Shipbuilding Returns unless they are intended to be classified in the Society's register book.

SHIPPING AND MARINE JUDICIAL DECISIONS.

(COLLABORATED SPECIALLY FOR THE MARINE RECORD).

Shipping—Bills of lading—Construction and Effect.—A bill of lading is both a receipt for goods and a contract to carry, and as a receipt it makes a prima facie case only, and is open to explanation. Planters' Fertilizer Mfg. Co., Ltd. vs. Elder et al., 101 Fed. Rep. (U. S.) 1001.

Shipping Articles—Validity.—Shipping articles which provide for a voyage to one or more foreign ports, or for coasting voyage, at the option of the master, do not sufficiently state the nature of the voyage, as required by Rev. St. §4511, and are void. The Occidental, 101 Fed. Rep. (U. S.) 997.

Freight—Construction of Contract.—When a bill of lading presented by the shipper, and signed by the agent of the ship, recites a shipment in bulk as so many tons, at so much freight per ton, it will be construed as a contract for carriage in bulk, and the freight is not subject to reduction because the cargo when delivered does not weigh out the quantity stated. Planters' Fertilizer Mfg. Co., Ltd. vs. Elder et al., 101 Fed. Rep. (U. S.) 1001.

Shipping—Suit for Damage to Cargo—Burden of Proof.—Where a bill of lading for a shipment of sugar recited the receipt of the sugar in apparent good order and condition, and stipulated for its delivery in like good condition, proof that it was delivered in a damaged condition casts upon the vessel the burden of showing either that it was not in good order when received, or that it was damaged through one of the perils excepted in the contract. Argo Steamship Co. vs. Seago et al., 101 Fed. Rep. (U. S.) 999.

Seamen—Serving Without Valid Contract—Right to Leave Vessel—Seamen who go on board a vessel, and enter upon the work as mariners voluntarily, but without any valid contract, may be required by the master to perform such services as are necessary to the navigation of the vessel while at sea, but they are not bound to continue with the vessel through the voyage, and may leave it at any port without forfeiting the wages earned, although they cannot in such case require the owner to return them to the port of shipment. The Occidental, 101 Fed. Rep. (U. S.) 997.

Shortage in Cargo Delivered—Burden of Proof.—Where bills of lading for cargoes of phosphate specified the quantity but contained the further statements, "Weight and quantity unknown," or "Weight unknown," the burden rests upon the ship owners to account for any discrepancy between the quantity delivered and that specified; but this is met by proof that the full quantity loaded was delivered, and this may be shown as against a consignee who has paid drafts drawn by the shippers for the full quantity specified, where the bills of lading were attached to the drafts. Planters' Fertilizer Mfg. Co., Ltd., vs. Elder et al., 101 Fed. Rep. (U. S.) 1001.

Contracts—Construction.—Where the United States charters a steam-tug for attendance on other vessels, not possessing the power of self-propulsion, engaged in government work at Cross Ledge Light in Delaware Bay, in order to remove them to a place of safety in case of stress of weather or accident, not furnishing the crew or pilot of such steam-tug, competent knowledge is required on the part of those having the tug in charge of the waters of that portion of the bay including the depth of water and channels between Cross Ledge Light and Morris River which is the most convenient and accessible haven of refuge, and the United States in engaging the services of the steam-tug had a right to assume that her master or pilot possessed such knowledge or at least that she was provided with a suitable chart of the bay from which such knowledge might be derived. Chas. Warner Co., vs. United States, 101 Fed. Rep. (U. S.) 884.

Sufficiency of Appliances.—The owner of a barge, not self-propelling, in contracting with the United States for the chartering or hiring of such barge by the latter, undertook that she should be "in first-class condition, fully equipped, with all the necessary anchors, lines, pumps, etc.," and that she should be "in charge of a competent man to be selected and paid" by the owner; the contract also provided for an inspection of the vessel by the United States before it should enter the service of the latter. Held, on the facts, that the provision for inspection was a stipulation on the part of the United States reserving to it the right to decline to permit the vessel to enter its service should the United States be dissatisfied with her condition, and was not intended to nor did it directly or indirectly operate to relieve the owner of his obligation that the vessel should be in proper condition, with sufficient equipment and in charge of a competent man. Chas. Warner Co , vs. United States, 101 Fed. Rep. (U. S.) 884.

A three-masted wooden schooner, known at the shipyard as No. 94, will be launched from James Davidson's shipyard at West Bay City in about two weeks. The vessel is 350 feet in length, 45½ feet beam and 27 feet deep. She will have a carrying capacity of 5,000 tons, will be equipped with steam windlass, deck hoists, pumps and siphons, have stockless anchors and be steered by hydraulic power. A wooden steamer is also well under way at the Davidson yard, and will be ready for launching in September. She will be of Canadian canal dimensions, 237 feet long, 42 feet beam and 24 feet deep.

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ESTABLISHED 1878.

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CLEVELAND, O., JULY 26, 1900.

HARBOR WORK AT OHIO PORTS.

The annual report of Col. Jared A. Smith, the United States government engineer at Cleveland, was given out this week by General Wilson, Chief of Engineers of the War Department. Col. Smith described the progress of the work on the various projects under his supervision; submits recommendations upon appropriations for the fiscal year beginning July 1, 1901; and makes some valuable and interesting observations of both a general and specific character. He renews the recommendation made a year ago that the Cleveland harbor be dredged to a depth of 25 feet, and says that the present projected depth of 21 feet is inadequate to accommodate the big lake carriers which seek a port there.

"A depth of 25 feet," he writes, "is not too much, because depths are measured from mean lake level, while the surface is often two or more feet below as a result of winds or other conditions." The colonel states also that "the harbor face of the breakwater cribs shall be protected by sheathing or other devices, and the left face be further protected by riprap of stone, covering the entire height of the timber cribs. Without such protection the cribs sooner or later will suffer great injury."

The dredging in the harbor during the year ended June 30, amounted to 520,792 cubic yards.

In referring to the projected breakwater system for Fairport harbor he says: "The project is for the construction of two breakwaters converging toward the lake, with a space of five hundred feet between the outer ends to form an entrance. The object of this arrangement is to prevent formation of sand bars at the entrance, heretofore the cause of great obstruction to navigation. The reactions and deflections of the seas which impinge upon the breakwaters, being in the direction away from the entrance, cannot in any way cause currents nor increase disturbance along the line of approach, both of which effects have been sources of difficulty and danger at the entrance to Cleveland, where the breakwaters are on the same straight line, and practically parallel to the shore." The fact that the Cleveland breakwater is constructed chiefly of timber, instead of stone, is another criticism made by the engineer.

Colonel Smith predicts that in the future the cost of making and maintaining harbor improvements will be vastly greater than it has been, because of great increase in the capacity of lake carriers, made necessary by the increased demands of commerce. At the same time he foreshadows the ultimate retirement from the freight carrying trade of the smaller vessels, and indicates in a cautious manner that the smaller harbors before long will have passed the period of their greatest utility. In treating these propositions the colonel says:

"Vessels are now carrying freight to and from Cleveland and other lake ports exceeding 7,000 tons in a single cargo. The tendency is for all the smaller vessels to disappear from the carrying traffic in heavy freights. New conditions are thus arising for channels, piers and breakwaters which the earlier constructions are entirely inadequate, and a large expense in the future will be incurred to meet the later requirements. No harbor having a depth of not more than sixteen feet (this applies specifically to Huron) can now be considered, to a small extent, as a port for receiving and shipping heavy freight. Small vessels are rapidly disappearing from the carrying of freight on the lakes, and it follows that harbors which cannot secure the necessary depths for large vessels cannot fail to lose tonnage and importance which they held under different conditions."

"Since the adoption of the present project of pier extention at Huron," the engineer goes on, "the size of vessels has greatly increased, so that a depth of twenty feet at mean lake level is essential in order to have sufficient depth for loaded vessels during the stage of low water." Colonel Smith therefore recommends that no further extensions of the piers at this port be made under the plans and limitations of the project of 1890. The sum of $25,000 which was appropriated in 1899 for pier extention will be expended for pier repair work instead. In this connection the engineer discountenances the effort to have a large sum of money expended at Port Clinton. Any dredging to obtain added depth and width there, he says, would require dredging of the channel not only in the harbor and between the piers, but also to a distance outside into the lake of at least of 2,000 feet, and the port is not of sufficient importance to justify the expenditure.

Colonel Smith says that the commerce of Cleveland is growing rapidly, that the freights reported in 1899 being 7,390,921 tons. Under the existing contract price it will cost $160,300 to complete the dredging of the harbor to twenty-one feet. The aggregate amount appropriated for river and harbor work at Cleveland since 1825 is $2,747,631.61, of which $2,214,278.80 has been expended. The balance is covered by uncompleted contracts. In the neighborhood of $350,000 will be needed to complete the harbor work now projected.

The estimates for completing the several projects at Lorain, Ashtabula, Fairport, Toledo and other Lake Erie ports are relatively somewhat larger than those made a year ago, because of the increase in the cost of construction material. The engineer enters an objection to the use of government breakwaters by private individuals.

VENTILATION ABOARD SHIP.

Probably the most striking event in the history of naval architecture is the substitution of metal for wood as a material for ships. The Monitor, in the days of the American Civil War, not only demonstrated the advantages of iron over wood for purposes of war, and revolutionized the methods of naval architecture, but also furnished a marked example of how sanitary ideas in shipbuilding have had their birth. In the fight between the Monitor and Merrimac it was found that there was not sufficient air in the turreted steamer for the crew, and that the suffiocating gases generated by the explosion of gunpowder found their way below and rendered it practically impossible for the men to work. Necessity, therefore, compelled the introduction of some apparatus for artificial ventilation. The old methods, in vogue for hundreds of years, had been retained, even under the new condition, and but for the striking exhibition of direct interference with fighting capacity, would have remained for many years longer. In the Monitor was placed a rotary blower, worked by steam. Air was thus drawn from one-half of the steamer through a system of pipes and forced into the other. Various changes were made in later ironclads of this period. In some the air was drawn down the turrets and forced throughout the vessel, thus rendering them more than ever liable to suffocate the men below in battle, while in others the supply was obtained through armoured cylinders and forced out through the turrets.

It was in the early ironclads that a peculiar disease developed which, being confined to those vessels, was soon designated ironclad fever. In this affection the initial symptoms were much like those of typhus, but in a short time severe occipital pain was followed by complete aphonia, and this by coma and death. The introduction of ventilating appliances caused the disappearance of this singular disease, and in time these metal boxes, almost entirely submerged, came to be regarded as probably the most salubrious vessels afloat.—J. R. Tryon, Late Surgeon-General U. S. N., in Cassier's Magazine for June.

THE HOBOKEN FIRE.

Though the actual loss of life in the great dock fire at Hoboken will probably never be known, it is now ascertained that the loss of life on the ships involved was not so serious as at first reported. The figures are seen to be as follows: Saale, 139 saved, 133 lost; Bremen, 188 saved, 12 lost, Main, 115 saved, 44 lost. Total, 442 saved, 189 lost. Deplorable as this total is, it is satisfactory to find that the figures given out earlier were greatly exaggerated.

The latest information from New York gives 400 dead and 300 injured as the result of the fire. The total loss of property floating and otherwise is stated to be not less than 20 millions of dollars. It appears that the Hamburg-American Company did not blow up their pier with dynamite to prevent the conflagration spreading. What explosions there were resulting in this desirable circumstance were unavoidable and unpremeditated. The directors of the Norddeutscher Lloyd announce they have decided that in view of the heroic conduct of the officers and men belonging to their steamers who perished in the performance of their duty in the recent disastrous fire at Hoboken, special pension shall be granted to their families in addition to the pensions they are entitled to accordance with the regulations of the Norddeutscher Lloyd's Seamen's Fund.

AN IMPORTANT SUIT.

In a dense fog in the early morning of Novembor 16 last, the steamer Conestoga ran into the water-works crib off the harbor at Chicago, and sank before she was able to make the harbor entrance. There was a loss on the steamer and cargo of about $80,000. Suit has now been commenced by the Anchor Line in United States District court against the city of Chicago and the Fitzsimmon-Connell Co., contractors, to recover the loss. The suit is of great importance, as its results will define the liabilities of cities at all lake ports in regard to their water cribs and the rights of navigation. It is claimed in the bill that the Conestoga was running at only four miles an hour, when suddenly the light of the crib was discovered dead ahead. There was no fog bell or other means of warning vessels except a light. In spite of all the captain could do the Conestoga crashed into the crib, opening up a large hole in her bow. The steamer filled so rapidly that she sank in 25 feet of water not long afterwards.

It is claimed that it was the duty of the city of Chicago or the contractors to maintain an adequate fog signal upon the crib to warn vessels of their danger, that the crib was in direct course of vessels, and that the city was liable because of its negligence. This is the first time the points raised in the bill have come before the United States courts for decision, and a long legal battle is expected.

H. D. Goulder, Esq., of Cleveland, and C. W. Greenfield, of Chicago, represented the Anchor Line, while C. E. Kremer, of Chicago, has been retained by the city to defend the suit.

EAST SHORE HARBORS, LAKE MICHIGAN.

Capt. Chester I. Harding, of the corps of engineers in charge of the river and harbor improvements on the east side of Lake Michigan, has made his annual report to the Chief of Engineers. It shows that at South Haven a 12-foot channel was made by dredging. A 15-foot channel was also made at St. Joseph harbor. In this work $15,888 was expended during the year. The cost of South Haven channel was $10,262. Vessels drawing 8 feet of water are now able to land at Saugatuck, alongside the outer portions of the south pier. The towns of Douglas and Saugatuck, however, are practically without outlet into the lake. A thirteen-foo channel was made at Holland harbor at a cost of $33,136 In repairing the piers at Grand Haven harbor $11,220 were expended. No work was done on improving the Kalamazoo river, as the money available was insufficient.

The Grand river was widened to 30 feet at the bottom and was made 6 feet deep.

Ludington harbor was dredged to a depth of 19 feet in the central channel and from 17 to 40 feet from either pier. Manistee channel has been deepened to a depth of 14 feet from Lake Michigan to Manistee lake.

THE work of preparing plans and specifications for the new ships provided for by the late Congress bids fair to employ pretty much all of the time and talent of the Bureaus of Steam Engineering, Construction and Repair, and of Ordnance for the next few months, and the results will be watched with much interest by the engineering world. The plans for several of these vessels have been on hand since last year, but the modifications rendered necessary in those plans by the progress of naval science will require considerable labor before they are ready for the contractors.

LAKE MICHIGAN TRAFFIC WAR.

An open rate of 1 cent per 100 pounds—20 cents per ton—was put into effect yesterday morning between Chicago and Muskegon, by the Goodrich Line. The openly avowed purpose was to make war on the Barry Line and force it out of the Chicago-Muskegon field. General Manager H. W. Thorp, of the Goodrich Line said: "The Muskegon business has come to us after many years of hard work, and we consider it ours. Having spent money to get it we are going to fight hard to keep it, and our policy from this time out is to fight to a finish any competitor in that territory." General Freight and Passenger Agent Miles E. Barry was out of the city yesterday, but President John Barry said: "I do not believe that it will be necessary for us to cut our freight charges at all in order to hold the bulk of the business. Those who accept the low rates offered by the Goodrich Line know to a certainty that the cost of driving us out of the field will be assessed upon them as soon as we quit, and that all hope of an opposition line to the Goodrich company at Muskegon is settled for all time. We have not a seyt met he Goodrich rates, and will not decide on our action before the return of Miles E. Barry.

Both of the parties to the controversy are strong financially, and have good records as fighters. The Barrys formerly lived at Muskegon and are well and favorably known there. When they came to Chicago a number of years ago to enter the field as tug men, the business which they followed at Muskegan, they were poorly equipped to fight the strong and well established companies then here, and it was predicted that they would last less than thirty days. By hard work and personal attention to all of the details of the business, including the actual work of managing their own tugs, they grew and prospered. When they finally sold out to the Great Lakes Towing Co. last fall, their fleet of tugs brought $170,000 cash and a number of shares of common stock in the Great Lakes Co. A portion of this money was invested in the Huron Line of freight and passenger steamers plying between Chicago and Milwaukee, with the dock and office property at the foot of Michigan street. Three passenger and freight steamers were added to the fleet. Two of these were put on the run between Chicago and Muskegon and one between Chicago, Waukegan and Kenosha. They have been doing an excellent freight and a fair passenger business on the west coast and a good freight and excellent passenger business to Muskegon.

The Goodrich line is equipped with a fleet of nine passenger and freight steamers, is well established and has strong connections with a number of railways. It reaches practically all of the principal ports on the west coast of Lake Michigan, but only touches at Grand Haven and Muskegon on the east coast. These points, however, cover a large number of the finest resorts of Michigan for the passenger trade and connect with the most productive of the rail lines for the freight business. The most significant fight in which the company was engaged was that of some years ago with the whaleback company on the Milwaukee passenger business. The company, of which Rockefeller was a leading owner, was finally glad to sell out its steamer, the Christopher Columbus, and it is now one of the Goodrich Company fleet. One of the possibilities of the present controversy between the two companies is that it will extend to passenger rates and finally affect the west shore trade of both lines. There is also a possibility that the Barry Line will extend its routes north so as to include all of the points now touched by the Goodrich Company. A small passenger steamer, acting as a feeder on freight and passenger business between Whitehall, Montague and Muskegon, was boycotted last week by the Goodrich Company for carrying Barry Line business as well. It has been replaced by the Sailor Boy, acting for the Goodrich Line alone, and it is presumed that the other small steamer, the Ryerson, will now become a feeder for the Barrys alone.

It is certain that the business out of Muskegon will be greatly increased by the new rates, as these do not cover the actual cost of either loading or unloading the freight. The old rates that have been in effect for years on the Goodrich boats between Muskegon and Chicago are as follows: First class, 25 cents per 100 ponnds; second class, 20 cents; third class, 15 cents; fourth class, 10 cents, fifth class, 9 cents; sixth class, 7 cents. All of these are now 1 cent, except bar iron, which is 6 cents for any quantity. The new rates are subject to change without notice.

ACCORDING to Sir Walter Besant, who writes of the Riverside of East London in the August Century, no one need go to Billingsgate hereafter, hoping to hear the fishwives rail against each other in the slang which has become, so to speak, classic.

EASTERN FREIGHT REPORT.

Messrs. Funch, Edye & Co., New York, in their weekly freight report, state as follows:

Whilst very few charters have been effected for grain, shippers are now showing more anxiety to procure tonnage and with the lower prices of corn we anticipate more active business in this commodity, berth rates have already responded materially to the decline in prices of cereals. One fixture has to-day been effected at 3s. 7½d. Cork f. o., which is an advance over what charterers have been previously offering. A new feature is the fixture of a steamer for coals from this coast to London and the demand for this article to Mediterranean ports still continues. The scarcity of prompt tonnage has also caused time charterers to pay enhanced rates, as is shown in the subjoined list. From the Gulf charters have been effected at 19s. for later loading, and altogether we consider the situation practically strong in favor of owners.

In regard to sail tonnage we have absolutely nothing new or of interest to report, the market remaining very strong, with rates unchanged. In consequence of the small number of vessels offering, business has of necessity again been very light, as shown by our report for the week.

LETTERS AT DETROIT MARINE POST OFFICE.

July 25, 1900.

To get any of these letters, addressees or their authorized agents will apply at the general delivery window or write to the postmaster at Detroit, calling for "advertised" matter, giving the date of this list and paying one cent.

Advertised matter is previously held one week awaiting delivery. It is held two weeks before it goes to the Dead Letter Office at Washington, D. C.

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Bailey, W. J., Norwalk
Brossoit, Moise
Briggs, George, Yukon
Cotton, Albert Jno., 3, Coffinberry
Connors, Miss Jennie, Yukon
Coleman, John A.
Cline, John, 2, W. P. Ketchum
Carnall, Harry, Clinton
Clarkston, Vannes, Palmer
Donahue, E M., Fred Kelley
Decker, Nick
Daley, John, Norwalk
Dibble, Thos. E.
Doyle, Frank
Eatten, Robert
Ferguson, D., 3, J. B. Ketchum
Farrand, H.A., Fred Kelley
Gorman, Chas.
Hoffman, Fred L.
Hanna, Albert, Gratwick
Jorsch, Wm., Traveler
Johnsen, Martin, Raleigh
Jakobsen, Andrew
Jarvis, Matt., Jr.
Krueger, Reiney, Maryland
Luxton, Hugh
Lorenze, Chas. E.
La Rush, A.
Morgan, Frank, 2, Geo. T. Hope
Mitchell, W. J.
Monzo, Fred L.
McAuley, H. A.
McGune, J.
McLaughlin, Harry
McLeod, Wm. J.
McNamee, P. J., Saveland
Nichols, Ernest, C. H. Green
Olawder, V. A., W. D. Rees
O'Rourke, Wm., Negaunee
Patey, George
Pliske, Max, F. L. Vance
Rood, Hubert, Traveler
Rieley, Robt. S.
Reed, J., Tacoma
Ross, William
Reynolds, Miss L. A.
Roberts, C. P.
Raymond, F. A.
Smith, Robert
Stone, Christ
Shackleton, Harry
Thomson, A. C., Maryland
Toll, Henry
Tucker, Harvey
Torango, Joseph
Thompson, Chas.
Trouton, George, Progress
Wise, Luious
Warner, Herbert J.
Young, B. F.

F. B. DICKERSON, P. M.

THE Cleveland-Cliffs Iron Co. is an important corporation in the affairs of this county. It has paid in taxes since its organization $919,000, and is now yearly contributing a large sum to the maintenance of our public institutions. It is providing place for over 2,000 men in all its departments, and is steadily growing larger and more important as a producer of iron ore and charcoal pig iron. It is contemplating additions, which, if made, will result in a considerable increase to present forces. The company now owns or controlls 125,000 acres of land and it intends to make this vast tract as productive as possible, as it is only through earnest activity that it can be held at a profit. It is the intention of the president and the directors to make the Cleveland-Cliffs one of the greatest iron mining concerns in the business, and to accomplish this it will be necessary to make provision for a much greater consumption of its own ores. Ishpeming is fortunate, indeed, to have such a concern in its corporate limits, and it is not improbable that the near future will bring to us from this source still greater things than the past, with its successes, has recorded.—Iron Ore, Ishpeming, Mich.

PROF. CHARLES L. BRISTOL, has a paper in the August Century, illustrated with full page pictures in tints, describing the Treasures of the New York Aquarium. Strange as it may seem, the favorite tidbit of fishes that are a little off their feed is a bit of salted codfish!

FLOTSAM, JETSAM AND LAGAN.

Capt. LeRoy A. Rand, of Chicago, is master of the new steamer A. B. Wolvin.

Charles Maytham, the head of the Maytham Independent tug lines, announces that he has agents in coast cities to buy some steel tugs for service on the lakes.

The schooner Humming Bird struck on the sunken wreck which lies on the north side of the entrance to the Commercial dock slip at East Tawas. She was released immediately, but sprung a leak. The old wreck now has but five feet of water over it, and it is becoming a dangerous obstruction to navigation.

Assistant inspectors Judson and Pletz, of the steamboat inspection service, Cleveland, are the men selected to have charge of the Toledo district, which formerly was in the Cleveland district, but is now an independent local district in the ninth supervising district. The new office will have charge of steamboat inspection at Toledo, Sandusky and Port Clinton.

Special civil service examinations are to be held this week in Chicago, Milwaukee and other ports in that district, of candidates for places in the life-saving service. There are vacancies at all the stations, and a number of able-bodied seamen are wanted for immediate appointment. Applicants must be eighteen years of age or over and citizens of the United States. They must have a height of at least five feet six and one-half inches, and be able to read and write.

A wooden barge is to be launched from Captain James Davidson's West Bay City yards in about a week. The vessel is 350 feet in length, 45½ feet beam and 27 feet deep. She will have a carrying capacity of 5,000 tons, will be equipped with steam windlass, deck hoists, pumps and siphons, have stockless anchors and be steered by hydraulic power. A wooden steamer is also well under way at the Davidson yard and will be ready for launching in September. She will be of Canadian canal dimensions, 257 feet long, 42 feet beam and 24 feet deep.

The Kenney Co., 72 Trinity Place, New York, sole manufacturers of Flushometers, a system for the manipulation of water closets that supercedes the old fashsioned noisy, and dirty overhead tank, has received from General Manager E. E. Olcott of the Hudson River Day Line the following: "Three years ago I ordered some of your Flushometers for use on our steamers Albany and New York. They were so thoroughly satisfactory that I later changed all the old closets for Flushometers. They are certainly the most perfect closet I have seen." Mr. Olcott moreover sends an additional order for his private residence and yacht.

The Sailors' Magazine, New York, says: "The talk of christening ships in the sense of naming them goes on, and the women selected to utter the name as they smash the wine bottle at the launching are still called god-mothers, but there is a lull in suggesting what shall take the place of the wine in the bottle when vessels are named. A correspondent asks, 'How would the breakage of a bottle or flask of sweet oil or its simple outpouring over the bow of a new vessel suit? It would symbolize smooth water and peaceful voyages. A much used and well understood proverb ('pouring oil upon the troubled waters') would thus be embodied.'"

The International Longshoremen's Association, which has been in session at Duluth for a week, has adjourned. The association will meet at Toledo, the second Tuesday in July, 1901. The following officers were elected: President, Daniel Keefe, of Chicago; first vice president, M. W. Sullivan, of Richmond, O.; second vice president, T. Herley, of Cleveland; third vice president, J. F. Manning, of Washburn, Wis.; fourth vice president, W. W. Lewis, of Ashtabula, O.; fifth vice president, G. W. Walker, of Marinette, Wis.; sixth vice president, P. Schubert, of Baltimore, Md.; secretary and treasurer, H. C. Barter, of Detroit. President Keefe and Secretary Barter are to select the delegates to the national convention of the American Federation of Labor.

At the Saturday session of the International 'Longshoremen's convention at Milwaukee, a resolution was adopted against the admission into any union of a man connected with the selling of liquor or any police officer. A resolution pending provides that a fine of 3¼ cents per ton be imposed on every vessel arriving from any port where a local union exists, and in which the vessel or cargo has been trimmed by non-union men. On a second offense the fine shall be doubled. Another resolution adopted provides that, beginning with next season, ten hours shall constitute a day's work for all hoisters and engineers instead of twelve hours as at present, and that no agreements shall be made with dock managers unless it contains the ten-hour agreement.

To hold the record for slow sailing is an achievement of which few shipowners are desirous. While Germany possesses the fastest vessels afloat that country owns the slowest one also. The Henry Clement arrived, two hundred and ninety-one days from Hamburg to Kiao Chou direct. Her reinsurance premium has risen on two occasions to 80 guineas per cent. within the last two years. In 1898 she arrived at Santa Rosalia, California, after a passage of 246 days from Hamburg. Moreover, Captain Albrandt seems to avoid signaling other vessels in order to relieve anxiety. The victualing of a vessel for nine months and a half is no easy matter; and, in the case of a sailing vessel, she is generally without such machinery as condensers. At any rate, her recent achievement is the longest voyage ever made.

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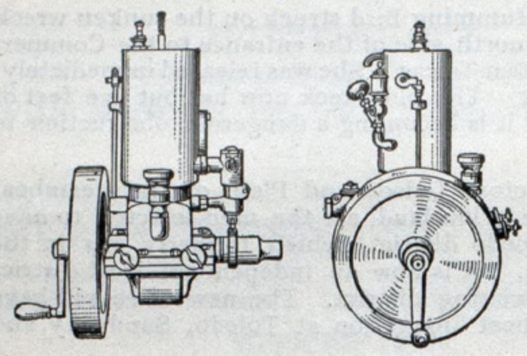

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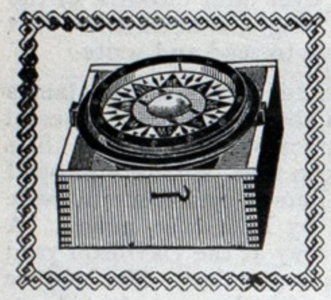

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CLAIM FOR DEMURRAGE.

A case appearing in a late issue of the Journal of Commerce, Liverpool, reads as follows:

It appears by a charter-party dated December 30, 1899, it was agreed between the owner of the Louisiana and the defendants, as freighters, that the steamship should "proceed to a customary safe loading berth in the River Nervion . . . as ordered (in writing) immediately on arrival or lay days to count, and there load . . . a full and complete cargo of iron ore . . . and being so loaded shall . . . proceed to a safe berth at Middlesbrough-on-Tees as directed by consignees or their agents, to whom notice is to be given, within office hours, in writing, of the steamer being ready to discharge, and there deliver the cargo on being paid freight." "Lay days shall commence when the steamer is reported at the custom-house, and in free pratique at the respective ports of loading and discharging, unless the loading or delivery has sooner commenced, but not to be reported between the hours of 4 p. m. and 10 a. m." The vessel was loaded, and proceeded to Middlesbrough. Notice was given to the plaintiff's agents that the vessel should discharge at Gjers Wharf, Middlesbrough. On the 7th of February, 1900, the vessel arrived and anchored at the Bell buoy within the port of Middlesbrough, but owing to deep tides and the draft of the Louisiana there was not water enough for her to proceed to the wharf named. At noon on February 7 the vessel had been reported at the custom-house and was lying at the bell buoy in free partique, and the captain gave to the charterers' agents the customary written notice of such facts and of his contention that lay days began at noon on that day. The charterers contended that until the ship had proceeded to the wharf as directed, the lay days did not commence. The vessel waited for sufficient water until February 12, when, the tides having sufficiently made again, she proceeded toward the wharf and was moored alongside at 4:30 a. m. on February 14. The plaintiff claimed demurrage for the period from noon on February 7 to 4:30 a. m. on February 14.

Mr. Justice Bingham read the following judgment: As a rule lay days begin to count as soon as the ship is ready to deliver her cargo at the agreed discharging berth, but the parties may stipulate differently if they choose, and here they have so chosen. In express terms the charter-party provides that the lay days are to commence when the steamer is reported at the custom-house and is in free pratique at the port of Middlesbrough. At noon on February 7 the steamer was reported and in free pratique. The lay days, therefore, began to run from that time. The defendants say that the plain provision of the charter-party is to be disregarded or to be read differently from its ordinary sense—first, because the notice of readiness to discharge could not be given while the steamer was at the bell buoy; and, secondly, because the provision as to the loading necessitates a different reading of the lay-day clause from that which its wording seems to require. As to the first of these contentions, I think there is nothing in it. When the vessel gets to the designated discharging berth the notice must be given, and if it is not given, and time is thereby lost, the shipowner will be liable in damages, but the omission to give the notice will not prevent the running of the lay days which has already commenced. As to the second contention, it is to be noticed that it is based only on the loading clause, which, except for the purpose of throwing light on the meaning of the lay day clause, is immaterial to the question in hand. The lay days at the loading port are to begin to run when the ship is reported at the customhouse and is in free pratique, apparently they may begin sooner if the loading berth is not named immediately on the vessel's arrival. For aught I know, the vessel may not be able to report herself at the customs in Spain until she is in a position to name her loading berth, and if so, that would account for the provision as to the charterer giving immediate notice of the berth. But whether this be so or not, the difficnlty in reading the lay day clause with the stipulation in the loading clause ought not to prevent me from giving to the former its plain effect in connection with the provision as to the discharge.

Judgment for the plaintiff, with cost.

VISIBLE SUPPLY OF GRAIN.

As compiled for THE MARINE RECORD, by George F. Stone, Secretary Chicago Board of Trade.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY Bushels.
Buffalo	1,964,000	533,000	508,000	1,000	100,000
Chicago	10,556,000	4,254,000	1,888,000	32,000	.....
Detroit	190,000	108,000	3,000	5,000	.....
Duluth	9,380,000	372,000	197,000	26,000	45,000
Fort William, Ont.	1,372,000	.....	.....	.....	.....
Milwaukee	976,000	465,000	244,000	1,000	11,000
Port Arthur, Ont.	91,000	.....	.....	.....	.....
Toledo	301,000	525,000	125,000	5,000	.....
Toronto	48,000	.....	9.000	.....	32,000
On Canals	42,000	1,230,000	400,000	36,000	10,000
On Lakes	1,015,000	2,170,000	146.000	.....	60,000
On Miss. River	.....	.....	.....	.....	.....
Grand Total	45.631,000	13.525,000	6,428,000	596,000	514,000
Corresponding Date, 1899	36,013,000	13,327,000	4,699,000	611,000	829,000
Increase	.....	.....	.....	29,000	.....
Decrease	450,000	83,000	716,000	.....	172,000

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

IT is understood the Pere Marquette Railroad Co. has let the contract for the construction of a new car ferry to run between Ludington and Manitowoc. She is to be larger than the ferry Pere Marquette and have a speed greater by two miles an hour.

RUSSIAN CANALS.

No country in Europe possesses such a magnificent river system as Russia, penetrating into the very heart of the country and a majority of the rivers are navigable for small craft from their mouths to their source. There is in European Russia according to the Coast Seamen's Journal of San Francisco, 33,046 miles of navigable rivers and 870 miles of canals, forming a grand and extensive network of waterways 33,916 miles in length. The water-borne commerce is simply enormous and is constantly increasing. In 1899 no less than 131,355 small vessels and 260,105 rafts were unloaded at the river ports of European Russia and Poland and the value of the merchandise so transported exceeded in value 412,510,000 roubles and its total weight was 30,404,710 tons. Plying on the Russian rivers (exclusive of Finland and Caucusus) were 2,640 steamers of 229,750 nominal horse-power and their crews numbered 42,689 men. There were besides 20,580 vessels of various denominations capable of carrying about 10,500,000 tons and with crews numbering 95,608 men. During last year 603 new steamers (costing 20,595 roubles) were built, and 27,271 boats (costing 31,078,000 roubles) were added to the river flotilla. Of the latter the greater number is destroyed each year after they have carried their cargoes to tide water. Of the whole river traffic (including rafts) of European Russia 67 per cent. is done upon the rivers Volga and Neva the remainder being 28 per cent. on the Dnieper-Nyeman and Western Dwina system, 3 per cent. only on the Don, 1.4 per cent. on the Dniester, and 1.1 per cent. on the Narova. In addition to this there is in Siberia 27,920 miles of rivers of which 16,366 are navigable for steamers and in Central Asia 2,745 miles more. The Russian Empire has within its boundaries the grandest river system in the world which will be of inestimable value in opening up that country to the commerce of the world.

ACCORDING to the edition of Lloyd's Register Book just published, the world's mercantile marine is divided among some forty nations, who last year owned among them 28,422 merchant ships, representing 29,043,728 tons. Of this large fleet of commercial argosies, close upon 50 per cent. of its carrying capacity is owned by Great Britain and her Colonies.

THE Bureau of Equipment of the Navy Department, is having some little difficulty in obtaining a sufficient number of colliers for the fleet in Chinese waters. Naturally, it will be impossible for our vessels to coal in China, and Manila will have to be used as a base of supplies in this line as well as in others. Rear Admiral Bradford, Chief of the Bureau, has now a large supply of coal at Manila and will endeavor to obtain colliers to run between each Chinese port, at which we may have ships, and Manila.

NOTICE TO MARINERS.

UNITED STATES OF AMERICA—NORTHERN LAKES AND RIVERS—NEW YORK.

TREASURY DEPARTMENT,
OFFICE OF THE LIGHT-HOUSE BOARD,
WASHINGTON, D. C., July 20, 1900.

BUFFALO BREAKWATER (N. END) LIGHT STATION.—Notice is hereby given that, on or about July 20, 1900, the sounding of the steam fog whistle at this station, on the crib behind the northerly end of the new breakwater, southerly side of the approach to Buffalo Harbor, easterly end of Lake Erie, will be resumed, during thick or foggy weather, without change in characteristics.

Thereafter the bell will be struck during thick or foggy weather only in case the whistle is disabled.

By order of the Light-House Board.

FRANCIS J. HIGGINSON,
Rear Admiral, U. S. N., Chairman.

LIGHT-HOUSE ESTABLISHMENT,
OFFICE OF THE LIGHT-HOUSE INSPECTOR, 11TH DISTRICT,
DETROIT, MICH., July 20th, 1900.

The changes in post lights in Duluth-Superior Harbors as mentioned in Notice to Mariners No. 105 of 1900, issued by the Light-House Board, Washington, D. C., were made on July 16, 1900; so that now in entering the harbors from the Duluth or Superior Entries, red lights will be found on the starboard hand and white lights on the port hand, through Allouez, Superior, Rices and St. Louis Bay Channels.

HEAD OF BELLE ISLE, DETROIT RIVER.—The keeper in charge of the 20 foot channel lights reports that the lantern light shown from a spar buoy marking the wreck of the schooner Leader has been stolen.

As this is the third lantern that has been stolen from the spar marking the wreck, it is not deemed practicable to show a light from this buoy.

By order of the Light-House Board:

J. C. WILSON,
Commander, U. S. Navy, Inspector 11th Light-House Dist.

DOMINION OF CANADA.

NEW LIST OF LIGHTS AND FOG SIGNALS.—A list of all the lights and fog signals on the coasts, rivers and lakes of the Dominion of Canada, corrected to the 1st of April, 1900, has just been published. Copies can be obtained free from the several agents of this Department, from collectors of customs in Canadian ports, and from the offices which are usually supplied with marine information by this Department, or can be obtained by mariners on application to the undersigned.

F. GOURDEAU,
Deputy Minister of Marine and Fisheries.

DEPARTMENT OF MARINE AND FISHERIES,
OTTAWA, CANADA, 10th July, 1900.

☞ All bearings, unless otherwise noted, are magnetic and are given from seaward, miles are nautical miles, heights are above high water, and all depths are at mean low water.

Pilots, masters or others interested are earnestly requested to send information of dangers, changes in aids to navigation, notices of new shoals or channels, errors in publications, or any other facts affecting the navigation of Canadian waters to the Chief Engineer, Department of Marine and Fisheries, Ottawa, Canada.

THE executors of the estate of Richard A. Chapman, of Ogdensburg, advertise for sale the undivided three-eighths interest of the estate in his steamer, John Rugee, at public auction in that city on July 31. The sale is subject to the charter of the steamer to the Cleveland-Cliffs Co. She is a wooden steamer, 12 years old, rates A1½*, and carries about 1,800 tons.

A TREASURY DECISION.

SHIP TIMBER AND SHIP PLANKING.

Ship timber and ship planking, planed or dressed on four sides, free from duty under paragraph 699, act of 1897, and Treasury decision 8564.

TREASURY DEPARTMENT, July 11, 1900.

Sir: The Department is in receipt of a letter from Mr. George E. Jackson, of your port, dated the 30th ultimo, concerning the entry of certain ship timber or ship planking "planed on four sides." Mr. Jackson states that he is unable to ascertain from the customs officers at your port whether or not the merchandise in question would be liable to duty upon importation.

Referring to the above, I have to inform you that ship timber and ship planking, planed or dressed as above stated, is free of duty under paragraph 699 of the act of July 24, 1897, in accordance with the decision of the Department dated December 1, 1887, (T. D. 8564), wherein it was held that certain ship planking dressed or planed on one side was entitled to free entry under the corresponding paragraph (No. 734) of the act of March 3, 1883, inasmuch as the law "makes no distinction between dressed and undressed ship timber and ship planking."

In connection with the foregoing, your attentton is invited to the rulings of the Department dated May 29, 1878, December 10. 1879 and August 16, 1894 (T. D. 3602, 4347 and 15308—G. A. 2742.)

Respectfully,
H. A. TAYLOR,
Assistant Secretary.

(674k.)
Collector of Customs, Buffalo, N. Y.

LUMBER HANDLING CHARGES.

At the recent convention of the longshoremen at Duluth, E. T. Hawley, of Detroit, introduced a resolution fixing the scale of wages for unloading lumber at all the ports from Port Huron to the extreme lower lakes. The schedule, which was agreed to by the delegates from all the lumber unloading ports affected and adopted by the convention, goes into effect on Aug. 1. Some vesselmen claim that the new schedule is an advance instead of a cut, which was expected. It is as follows:

1 and 2 in. white pine, per M., 32 cents.
1 and 2 in. Norway, per M., 35 cents.
1 and 3 in. hemlock, per M., 38 cents.
Culls, saps and box lumber, per M., 36 cents.
Strips, per M., 36 cents.
Cut offs and shorts, per M., 40 cents.
Hardwood, per M., 50 cents.
Lath on deck, per M., 6 cents.
Lath in hold, per M., 8 cents.
Shingles, 18 in. on deck, per M., 6 cents.
Shingles, 18 in. in hold, per M., 8 cents.
Timber, 6x6 and under, per M., 38 cents.
Timber, 6x8 and 8x8, per M., 45 cents.
Timber in hold, extra per M., 10 cents.
3 and 4 in. plank, per M., 38 cents.
Ties, cedar, each, 1½ cents.
Ties, tamarack and hemlock, each 3 cents.
Cedar posts, dry peeled, per cord, 35 cents.
Cedar posts, unpeeled, per cord, 40 cents.
Cedar posts, per 100, $1.80.
Grape post, per 100, 75 cents.
All lumber over 18 feet in length, 5 cents per M., extra.
All boats 700 M., or over, 3 cents extra for cargo.
All boats over 11 feet in depth, 50 cents per inch extra, or $5 for full foot, government measure.
All boats with deck loads reduced 8 cents extra per M.
Boats with beam in hold, 3 cents per M. extra entire cargo.
Boats with archway, 3 cents extra per M. for entire cargo.
Boats loaded by non union men, 5 cents per M., extra.
Original bill of lading must be shown by captain before boat is unloaded.

REPORTED BY THE LOOKOUT.

The engine for the steamer being built by the Green Bay Vessel Co. has reached Green Bay, Wis., and been placed in position. The steamer will be ready for launching in about a month.

The Navy Department has been notified by the Cramp Co., that the battleship Alabama will be ready for her official trial trip on Aug. 15, and the Trial Board will be ordered to Philadelphia on that date.

Secretary Root, of the War Department, has granted permission to the Board of Trustees of the sanitary district of Chicago, to widen the Chicago river and to use such means as are deemed necessary to modify the current caused by the influx of water from Lake Michigan.

Sweden is about to build several protected cruisers of 4,000 to 5,000 tons. They will have super-imposed turrets like the American battleships Kearsarge and Kentucky. The ships will also have high freeboards, and will carry batteries of six-inch and eight-inch guns of the Bofors (Swedish) model.

Whether we compare American ship-building now with its condition at any previous period, or with the same industry aboard, the present prosperty of the trade is very marked. Merchant vessels under construction in the first quarter of the year in this and several other countries are thus stated in terms of their tonnage:

Great Britain	1,260,000	France	106,000
Germany	157,000	Italy	105,500
United States	115,500		

Miss Weston has recently added a "Laughable" column to her little magazine Ashore and Afloat, and here is a good example from it of the woeful lack of "science in the pulpit" now so prevalent. A well-known minister was addressing a congregation of seamen at a water-front mission. Thinking to be impressive, he pictured a ship trying to enter a harbor against a head-wind. Unfortunately for the success of the metaphor, his ignorance of seamanship placed the ship in several singular positions. "What shall we do next?" he cried. "Come down off the bridge," cried an old tar in disgust, "an' lemme take command, or ye'll 'ave us all on the rocks in another 'arf a second!"

The obstruction to navigation by the Washington street tunnel in Chicago river is forcing itself past the time of wordy resolutions to the period of actual business loss. For two weeks past cargoes of grain in elevators in the south branch have been on the market for vessels to carry them forward. Shippers have been anxious to pay the ruling rate of 2c to Buffalo, but vesselmen have been averse to taking grain from the south branch if they could get cargoes elsewhere at the same figure. On account of the light draught of water over the tunnel all decent sized vessels stood to lose about 10 per cent. of their freight as they could only load to the tunnel draft or take all chances on sticking there and paying heavy tug bills.

Capt. C. W. Comerford, one of the oldest captains on the lakes, was at Toledo, this week, with his schooner John Miner. The captain gives many reminiscences of the early days on the lakes. He says that one time the schooner Chancellor J. Wells, was in a big storm abreast of Port Stanley, on Lake Erie. She had as captain, Paddy Langdon. His brother fell overboard, and Paddy jumped into the lake and held on to him until a boat was lowered. Paddy and his brother were hauled into the small boat. The Wells was trying to come about to pick up the small boat when Paddy cried out to the men on the Wells: "Go on to Buffalo; clear out." The Wells went on her way, and the small boat succeeded in getting into Port Stanley. Paddy put the small boat on the cars, and he with the other men, got to Buffalo all right.

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Are prepared to make rates on all classes of Marine Insurance on the Great Lakes, both CARGOES and HULLS.

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MORSE IRON WORKS CO, foot 26th and 27th Streets, Brooklyn, N. Y.
DAVID CARTER, Manager Detroit & Cleveland Navigation Co., Detroit, Mich.
T. H. NEWMAN, Manager Cleveland & Buffalo Transit Co., Cleveland, Ohio.
SPITZER & CO., Bankers, Spitzer Buuilding, Toledo, Ohio.
F. A FORBES, General Manager Michigan Telephone Co., Detroit, Mich.
JOHN & F. P. GORDON, Traffic and Steamboat Managers, Buffalo, N. Y.
W. L GUILLEUDEU. Pres. Old Dominion Steamship Co., Pier 26, North River, N. Y.
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The 34th Annual Encampment

of the G. A. R. at Chicago. For this occasion the Nickel Plate road will sell tickets at one cent a mile traveled on August 25th to 29th, inclusive, good returning until August 31st, inclusive, or by deposit until September 30th, inclusive, on any one of our Peerless Trio of Daily Express Trains were scheduled to stop. Write, wire, 'phone or call on nearest agent, C. A. Asterlin, T. P. A., Ft. Wayne, Ind., or E. A. Akers, C. P. & T. A., Cleveland, O. 150-34

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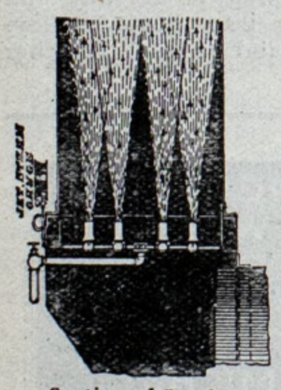

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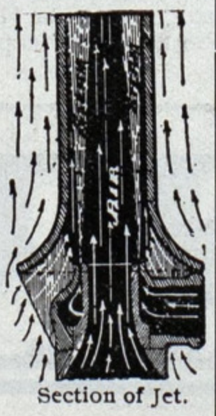

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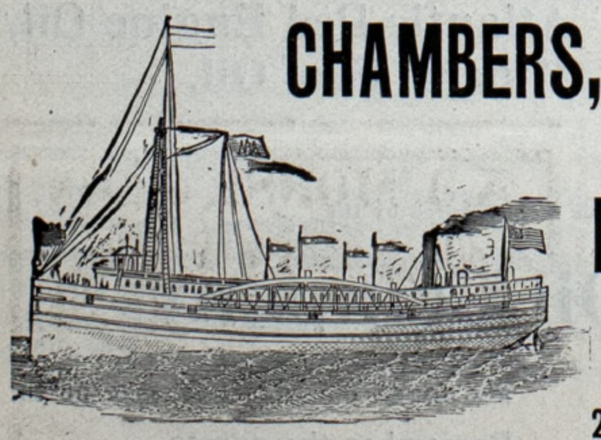

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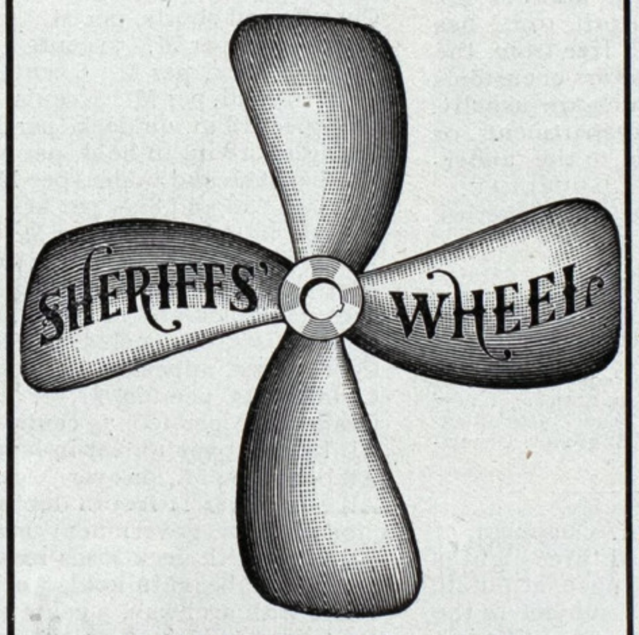

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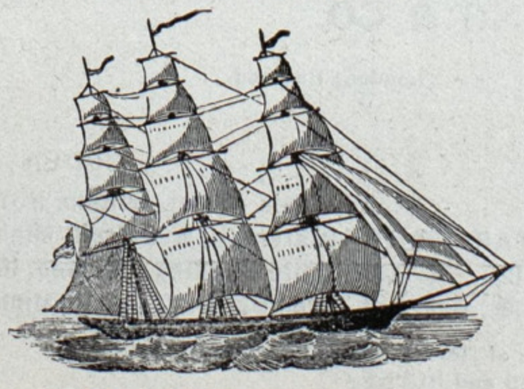

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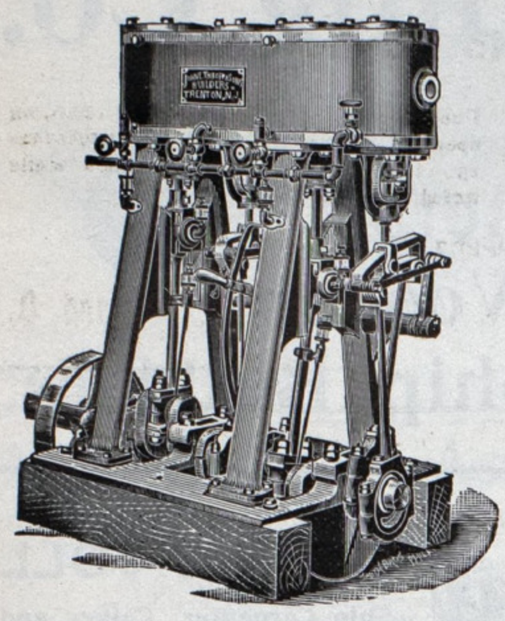

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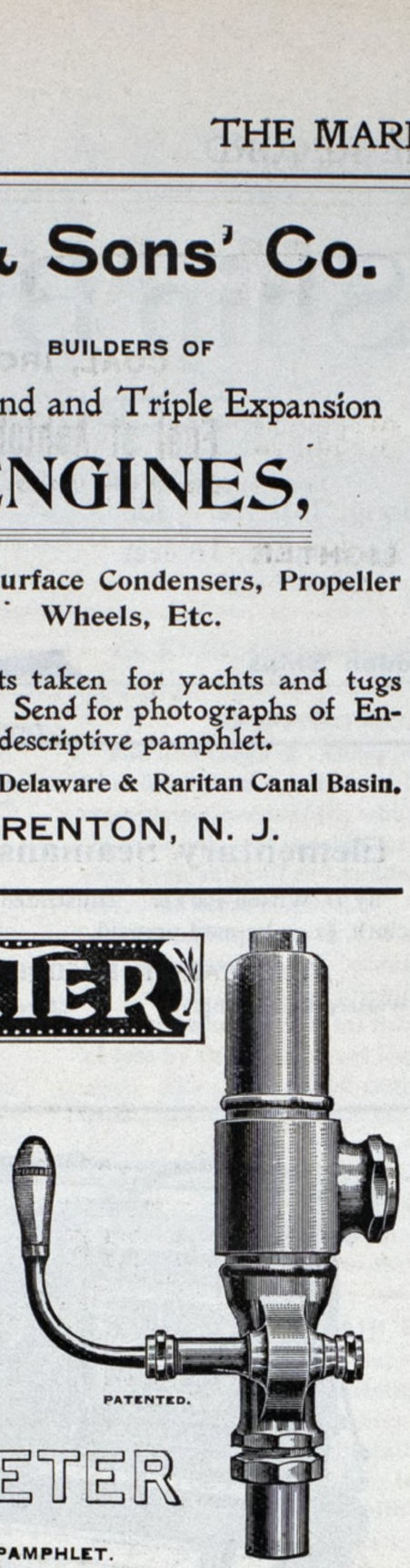

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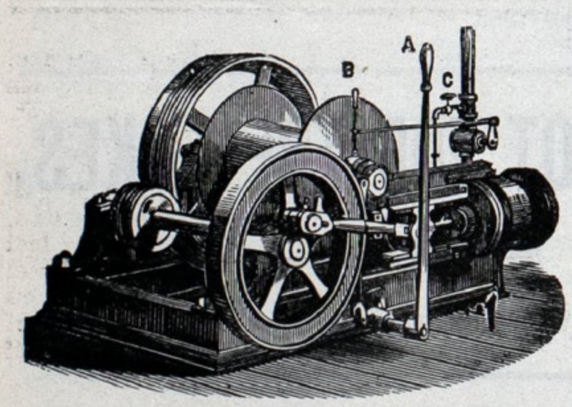

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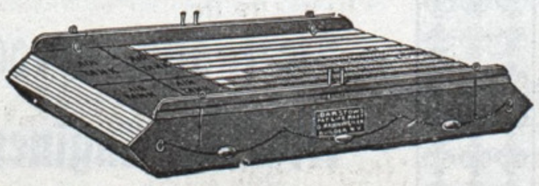

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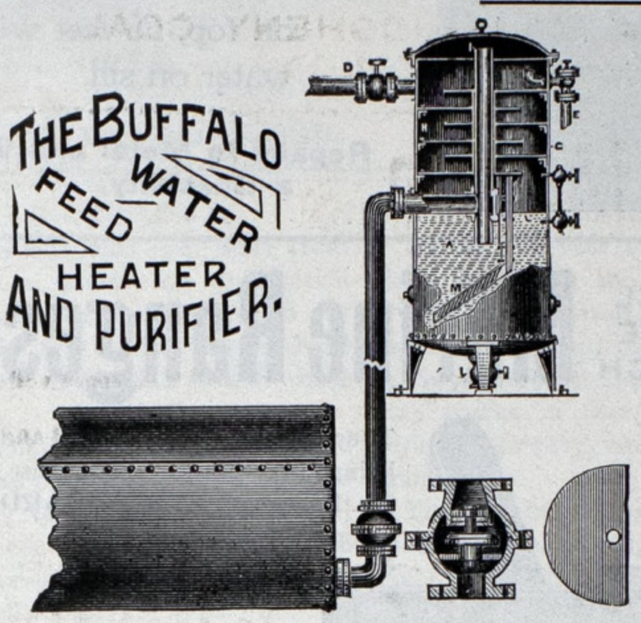

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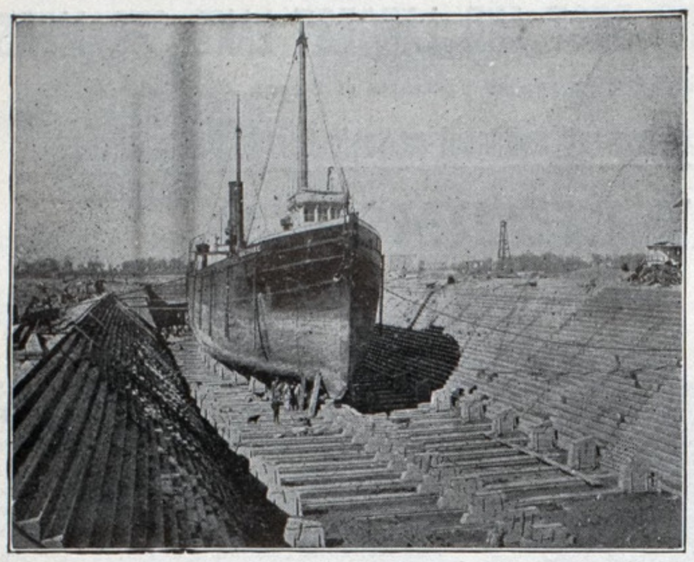

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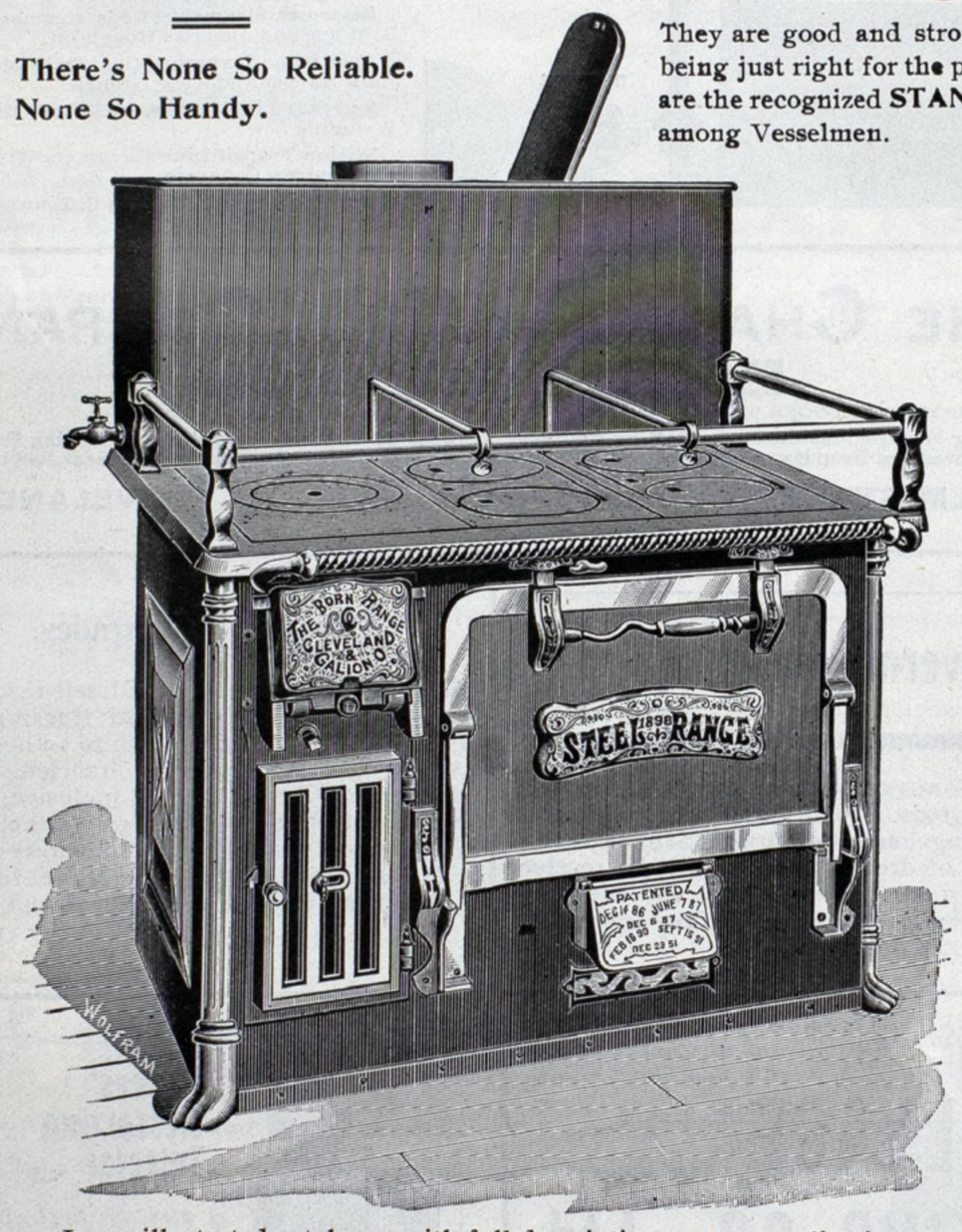

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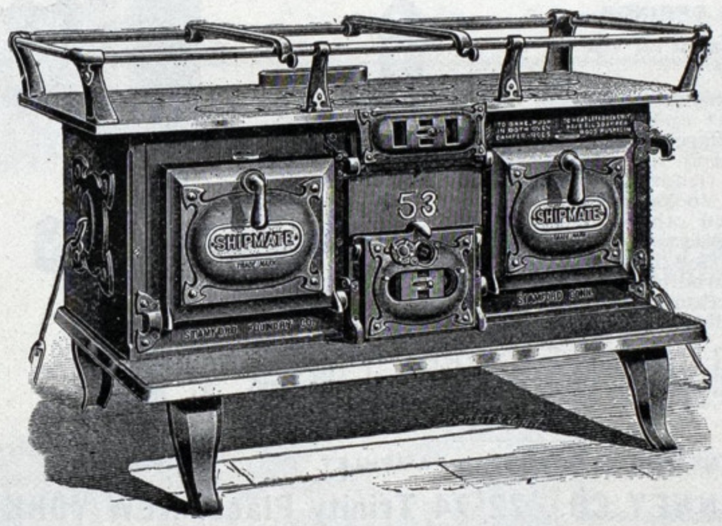

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